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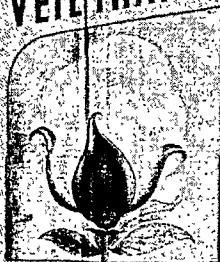
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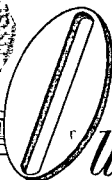
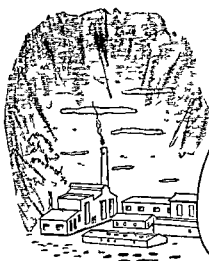
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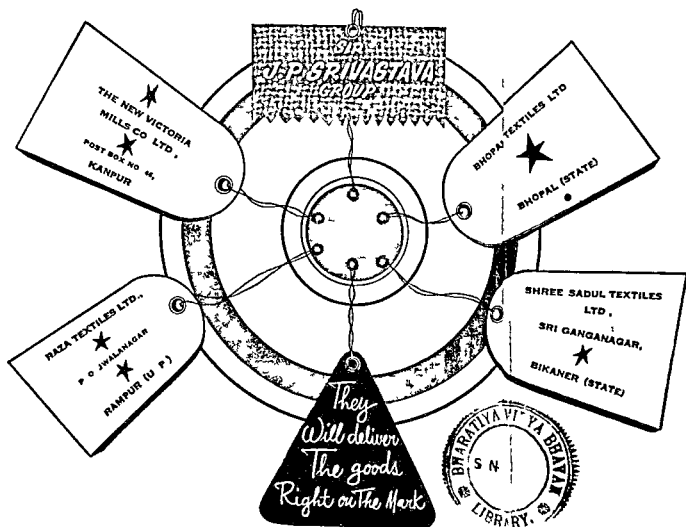
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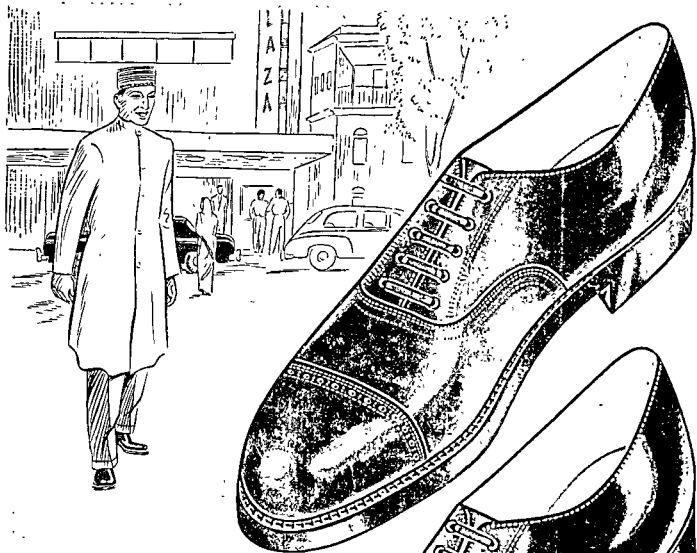
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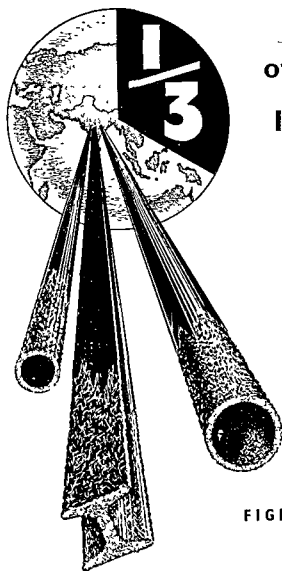
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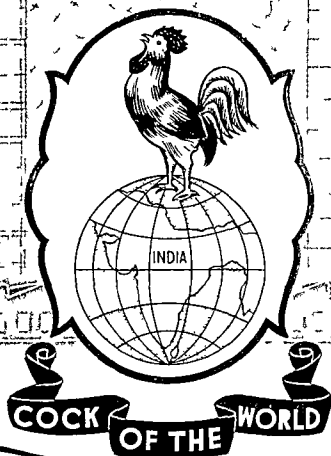
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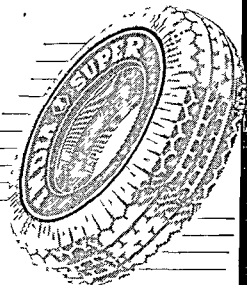
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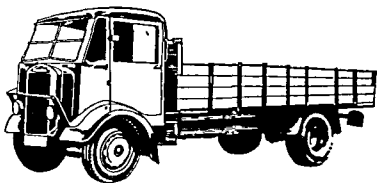
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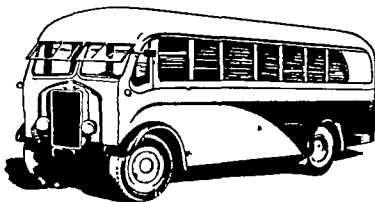


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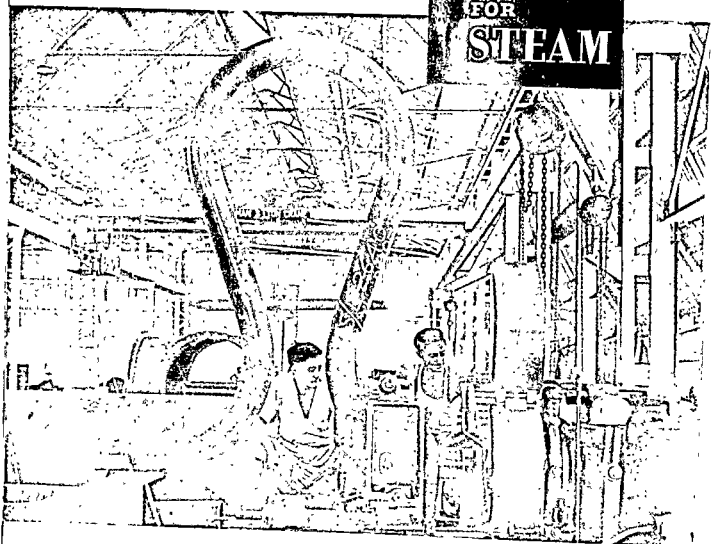
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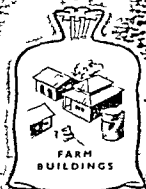
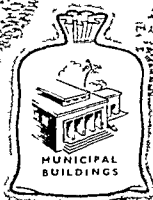
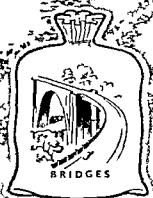
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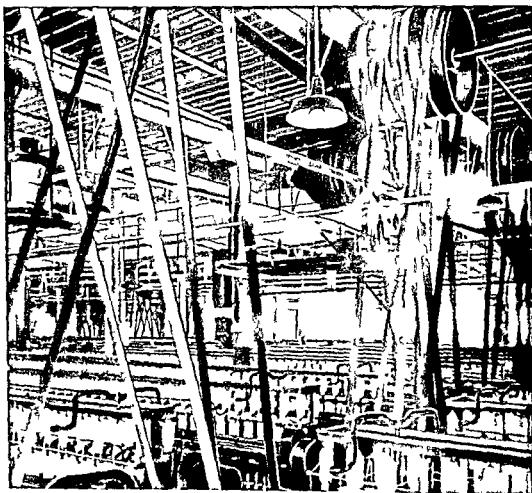


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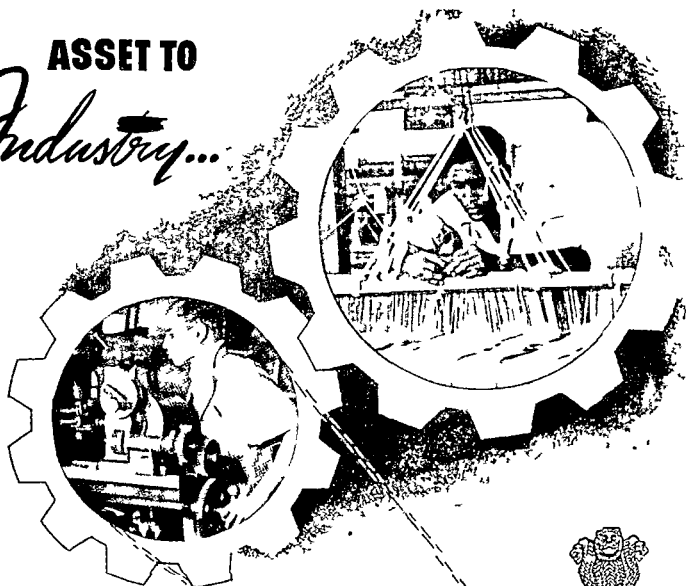




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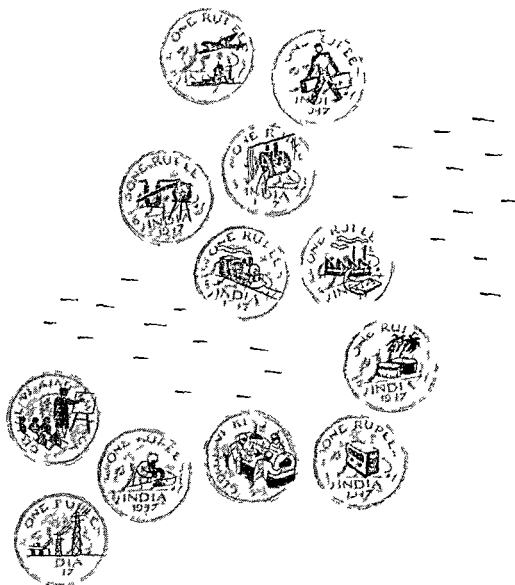


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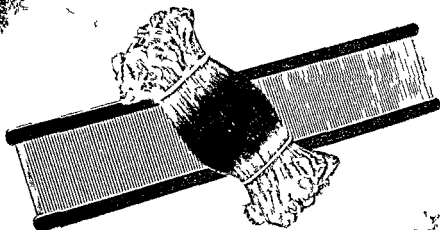
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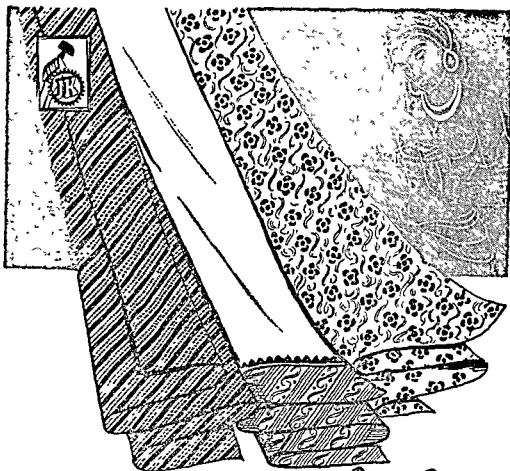
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A BUSINESS		<i>Close-up</i>	
		1947	1948
		Figures in Lakhs of Rupees	
Total policy in force at the end of the year	31,26	34,41	
Total Life Funds at the end of the year	6,67	7,39	
Total premium earning for the year	1,41	1,59	
Total expenses of operation for the year	41	48	
Total death and maturity claim paid in	46	48	
New business written in the year	6,72	6,87	
Total funds at the end of the year	6,77	7,51	
Total liabilities at the end of the year	7,34	8,18	

President: **LALA LAKSHMIPAT SINGHANIA**

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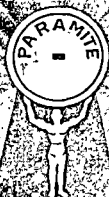
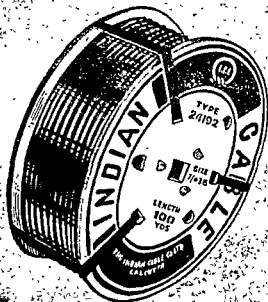
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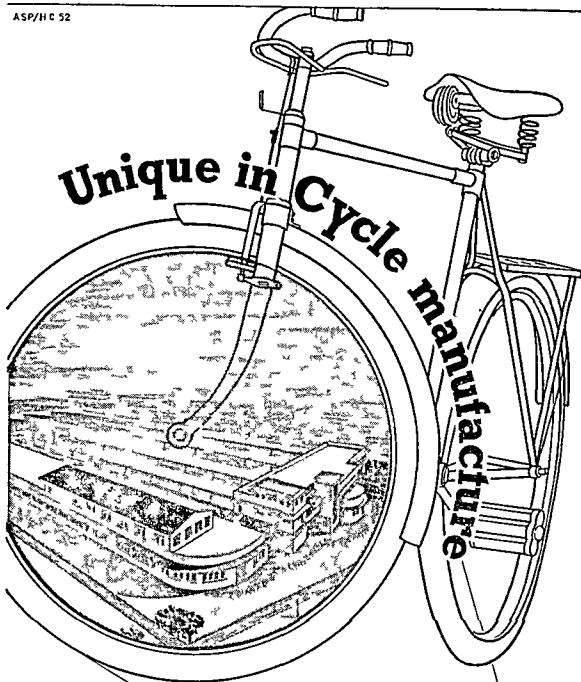
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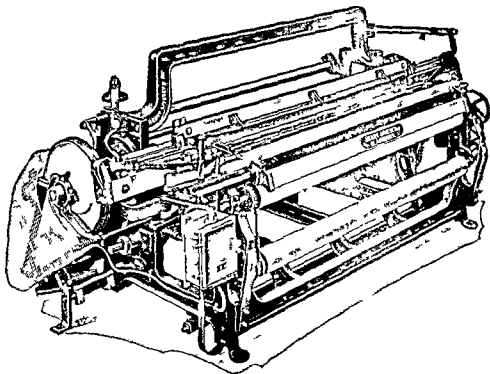


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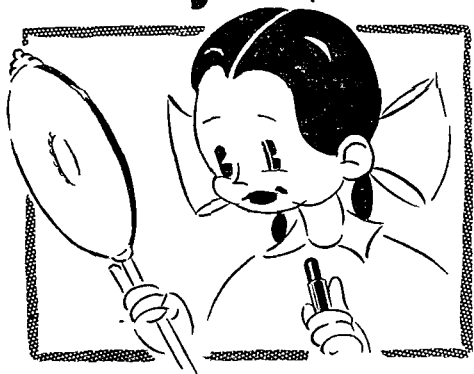
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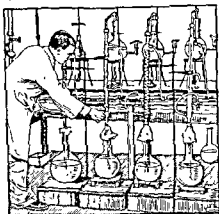


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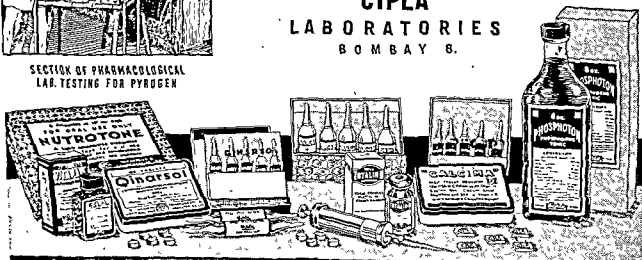
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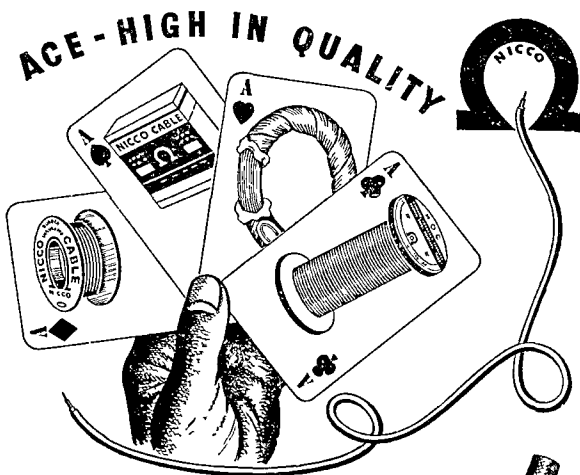
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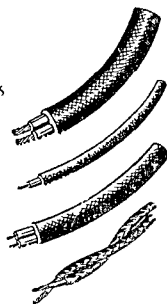


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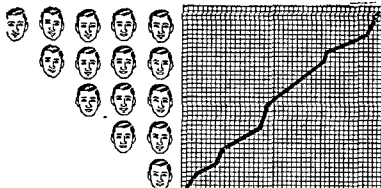
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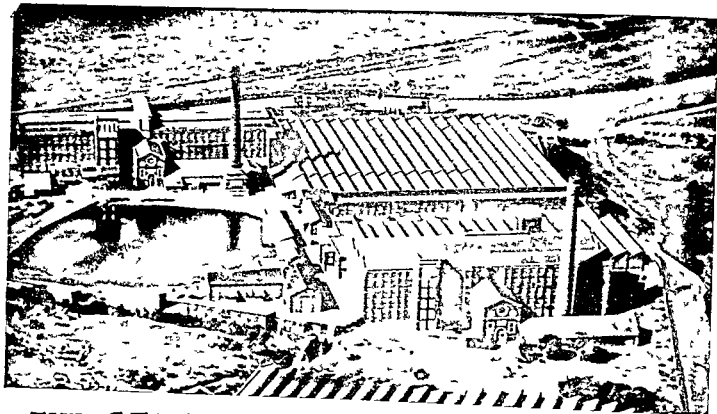
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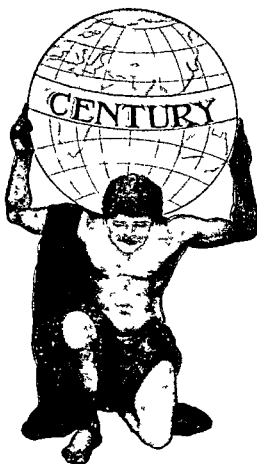
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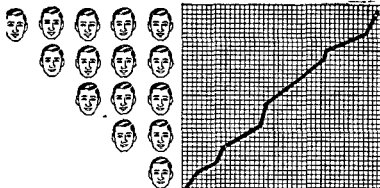
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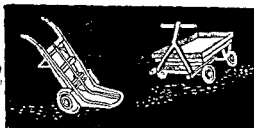
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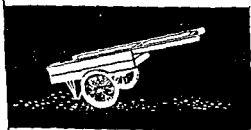
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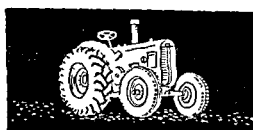
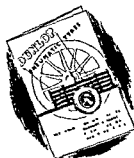
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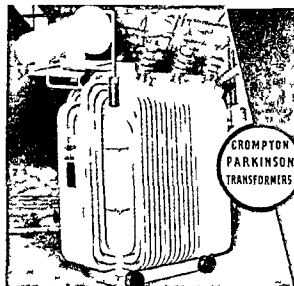


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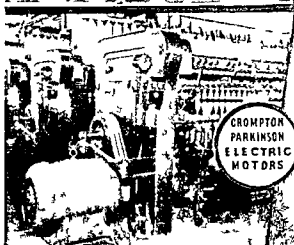
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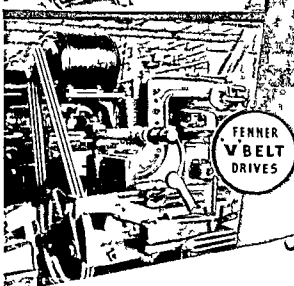




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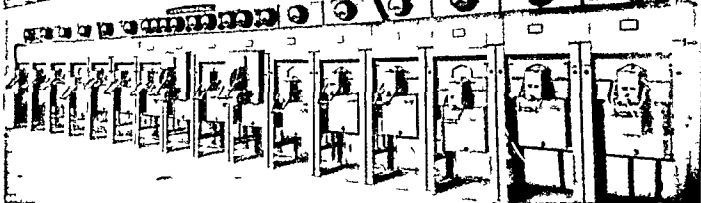
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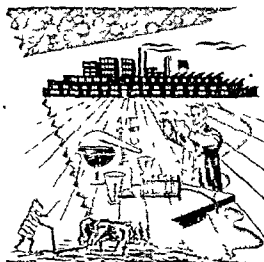
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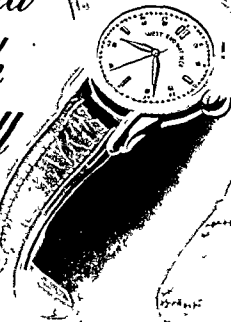
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Editorial Introduction...

TO its yearly publication which, for nearly a decade and a half, has been a chronicle of the vicissitudes of the Indian Cotton Textile Industry, the Indian Cotton Textile Industry Annual adds, this year, a special Centenary Volume to celebrate the first Centenary of India's cotton mill industry. Few people in this country have perhaps cared to remember that, with the turn of this half century, the Indian Cotton Textile Industry, as a factory industry, completes the first century of its existence. It is an index of its importance and an additional reason for jubilation, that the first Centenary of the greatest national industry falls due for celebration in the very same year in which, after achieving independent status at considerable sacrifice, India has become a Sovereign Democratic Republic.

In the older form of a Cottage Industry, our cotton textiles, which won world-wide admiration, date from time immemorial and it has been established beyond controversy that India is the birthplace of Cotton, as indeed also of cotton textiles¹ and Sugar and Sugarcane². Although technically, the first Cotton Textile Mill on modern lines was established in 1818 in Bengal, it was in Bombay that the real foundation of the mill industry was laid. It was in the year of grace 1851 that the plans of the first mill were conceived, machinery ordered from Great Britain, and construction work undertaken at Bombay. Progress was extremely slow indeed upto the outbreak of the first World War of 1914-18. It is a matter of common knowledge that conditions were often such as to make the industry almost despair of its survival. Indeed, the story of the Indian

Cotton Textile Industry during the last 100 years is in many ways identical with the story of the nation's struggle for political independence. The same forces which threatened the latter also threatened the former. The decline of Indian handloom weaving by the middle of the nineteenth century almost spelt the doom of Indian freedom. The courage that was needed to start a Cotton Mill in India in the days when all the might of the ruling power was set against the development of the cotton mill industry in this country was not less than the courage needed to inaugurate the Swaraj or the Home Rule Movement. Today, India ranks as the third largest producer of cotton goods in the world, and the thoughts of her people must turn in profound gratitude to those pioneers who set out with undaunted courage and firm determination on this seemingly hopeless venture in the face of the many handicaps that must have stared them in the face.

To the growth of the Indian Cotton Textile Industry, all sections of the people have contributed in an equally meritorious measure. While the earlier millowners evinced a strange mixture of business acumen and broad patriotism, their successors had to contend with endless obstacles till the increased political power of the Indian people and changes in the wider sphere of world economy and international trade gave them a more secure position. But there is no doubt that the Indian industry would have come to an early end, if the leaders of the people had not made the cause of the Cotton Textile Industry a national cause and if the people had not responded to the call to rally to its support in periods of crisis.

If Swadeshi and Swaraj were the twin ideals of the people, Indian cloth, too, was for decades a synonym of Swadeshi. The might of Mahatma Gandhi, the Father of the Indian Nation, was behind the move-

¹ Vide M. P. Gandhi's "Indian Cotton Textile Industry"—with a foreword by Sir Purshotamdas Thakurdas 1930 and "How to Compete with Foreign Cloth" (Gujarati edition) with a foreword by Mahatma Gandhi 1931.

² Vide "Problems of Sugar Industry in India" by M. P. Gandhi 1935 pp. 400.

ment for the boycott of foreign imported cloth Picketing was done with all the selfless zeal that the Congressman of the thirties was capable of And the Indian industry forged ahead in the confidence that its future was bound up with the future of a great nation which was being awakened by selfless men to its great destiny

The Indian Cotton Textile Industry is thus the product of historic forces the prize of the nation's triumph in the fight for freedom Its future is undoubtedly as bright as its past is inspiring With the attainment of freedom however the sentimental approach of the old days becomes inappropriate *Not only have the people a right to expect the best in quality and prices from the industry by which they have stood through thick and thin but the industry too has to rise to its new responsibilities and opportunities* The dissatisfaction felt by the average man with cloth supply in the last few years is a measure of the manner and extent to which the industry can fall short of public expectations And what is even more important the time is gone when the satisfaction of home demand can be deemed to be an adequate achievement for the Indian Cotton Textile Industry In the few years following the second World War Indian cotton goods have flowed into neighbouring foreign markets The advantages which have throughout history made India the natural home of the Cotton Textile Industry, should enable us also to become a great exporter of cotton goods to overseas markets

The rapidity with which new techniques are being established in the textile industry abroad and the relative backwardness of this country in this respect raises problems which the industry cannot solve except with the greatest effort The time has come when such efforts should be put forward in unstinted measure so that the Indian Cotton Textile Industry can repay the debt it owes to the nation and the

people by achieving efficiency of the highest order and by suitable expansion which would ensure supplies of increased quantities of cloth of superior quality at reasonable prices in the years to come This will also help the country to raise its standard of living and to contribute to the increased prosperity of our teeming millions

ACKNOWLEDGMENT

We take this opportunity of thanking all the friends for their authoritative contributions and the various advertisers for the extension of their co-operation which has enabled us to present this volume in celebration of the first Centenary of this national industry in its present form

We are also deeply indebted to Dr Rajendra Prasad President of the Republic of India Governors of States Ministers of the Union Government and other eminent personages in the public life of the country who have kindly sent us inspiring messages on the occasion of the publication of this Centenary Volume

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We will feel grateful to readers of this volume if they will kindly let us have their impressions of it We will also welcome suggestions from them in respect of the forthcoming volume on the Major Industries in the Republic of India which we intend to publish early in 1951

M Gandhi

(M P GANDHI)
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THIRD INDEPENDENCE ANNIVERSARY
15th August 1950

Message from the President of India



GOVERNMENT HOUSE,
NEW DELHI

Dear Shri Gandhi,

I am very pleased to learn that you are going to bring out a "Cotton Textile Industry Centenary Volume" to commemorate the first hundred years of the Textile Industry in India.

I have had occasions to see your publications in connection with Cotton Textile Industry and have to congratulate you not only on their fine get-up, but also on the very useful material contained in these publications. I have no doubt that this Centenary Volume will maintain the highest standard and will be worthy of being a commemoration volume on the subject of Textile Industry of India. It appears you have secured the support of a galaxy of writers who can speak with knowledge and authority on the subjects taken up by them, and their contributions are sure to make the Volume a useful one for everyone interested in the subject

I wish you all success.

Yours sincerely,

Rajendra Prasad

Sriyut M. P. Gandhi,
C/o Gandhi & Co.,
Jan Mansion,
Sir Pheroazshah Mehta Road, Fort,
Bombay 1.



GOVERNMENT HOUSE,
BOMBAY 6

I congratulate the Editor of the Indian Cotton Textile Industry Annual on his enterprise in producing a special volume of the Annual to celebrate the centenary of the cotton textile industry in India. A hundred years is a long time, and the industry can look back with pride on its achievements during these many years. But it is much more important to look ahead, and while wishing the cotton textile industry many years of prosperity, I hope that all those concerned will put forward their best efforts in the interests of the industry as a whole.

Message from
His Excellency
THE GOVERNOR OF BOMBAY



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Dear Mr. Gandhi,

Message from
His Excellency
THE GOVERNOR OF U.P.

I am glad to hear you are bringing out an illustrated volume on art paper to celebrate the first centenary of the Indian Cotton Mill Industry. I have no doubt judging from your previous efforts the publication will be very interesting and instructive.

The Cotton Textile Industry has been the first and greatest of large scale undertakings in India and its hundred years of existence are worthy of commemoration.

I wish you every success in your enterprise.

Yours sincerely,

GOVERNMENT HOUSE,
CALCUTTA

My esteemed friend Sri M. P. Gandhi, is a man of versatile talents and his contribution to the development of Indian industry has been great. His Annals on cotton, sugar and other industries have definitely been of the greatest use to all concerned and have proved a store house of correct information. He now proposes to bring out a Centenary Volume to commemorate the completion of hundred years of the great textile industry. It is a worthy enterprise to commemorate a notable event. The textile industry is our premier Indian industry and for the first time it indicated to the world at large the capacity and the genius of the Indian business people to build up a great industrial India.

I have no doubt that this Commemoration Volume will be widely welcomed. I wish it all success.

Message from
His Excellency
THE GOVERNOR OF BENGAL

KAILAS NATH KATJU

GOVERNMENT HOUSE
COOTACANUND

I am very glad to learn that the Editor of the "Indian Cotton Textile Industry" is bringing out a special volume to celebrate the Centenary of the Cotton Textile Industry in India. I would like to congratulate Sri M. P. Gandhi on his enterprise and initiative in compiling this Volume, which, I understand, will contain contributions from eminent industrialists and distinguished men.

Message from
His Excellency
THE GOVERNOR OF MADRAS

Madras has played an important role, particularly in the last quarter of a century, in developing the spinning and weaving industry in India. The Indian Cotton Textile Industry is one of the most important and well organised industries in India, and any literature to illustrate the origin and development of the industry is most welcome.

I would like to send my best wishes for the success of the Volume and express the hope that it will be useful both from the point of view of the industrialists and of the public.

KRISHNA KUMARSINHI BHAVSINHI

GOVERNMENT HOUSE,
RANCHI

The Indian Cotton Mill Industry is the premier industry of India. It has gone through vicissitudes of fortunes during the last hundred years which it is important for present and future Indian industrialists and administrators to know. All future industrial progress will depend upon the experience the country has gained in the past in running big industries. An authoritative and authentic account of the Indian Mill Industry in the last hundred years is therefore very necessary for those who are interested in India's industrial development. I am therefore particularly gratified to learn that Prof. M. P. Gandhi has decided to bring out a special publication to celebrate the first Centenary of the Indian Cotton Mill Industry. Prof. Gandhi's Cotton Textile Industry Annuals have been found to be very useful—nay almost indispensable to those who have to deal or discuss problems relating to the Cotton Industry. He is therefore best qualified to bring out the special number which is intended to chronicle the history of this industry of last one hundred years.

I wish it complete success

M. S. ANEY

Message from
His Excellency
THE GOVERNOR OF BIHAR

GOVERNMENT HOUSE,
PACHMARHI

Shri M. P. Gandhi is publishing a special volume to celebrate the first 100 years of the Indian Cotton Textile Industry. I had gone through his previous publications—the Indian Sugar Industry Annual and the Indian Handloom Industry Annual. I have known Shri Gandhi for a number of years. His publications contain the most accurate and detailed information. He makes the subject which he deals with very interesting. The information given is full and useful. The cotton textile industry is one of the most important and well established industries in India. Indians have shown, if one may say so, a special talent for this type of industry. It has its own difficulties today and is passing through critical times. It has great scope for expansion. The publication of such a volume at such a time is bound to be useful and helpful. I feel confident that this commemorative volume would be highly useful and helpful, and would be welcomed by all.

MANGALDAS PAKVASA

GOVERNMENT HOUSE,
PURI

I have had the benefit of reading Shri M. P. Gandhi's publications for many years, and have always found them helpful and interesting. I shall look forward to the Centenary Volume which is expected to be out soon.

ASAF ALI

Message from
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THE GOVERNOR OF ORISSA

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THE GOVERNOR OF MADHYA PRADESH

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MINISTER FOR FINANCE

The celebration of the first Centenary of the Indian Cotton Mill Industry is a fitting occasion for taking stock of its growth in the past and forecasting its development in the future, especially as the end of the period marks approximately the end of an era and the beginning of another in the life of the nation. I have no doubt that the Centenary Volume which you intend to bring out will do justice to the occasion and marshal facts, figures and trends with the thoroughness and insight which readers of your annual surveys have learned to expect.

Message from
The Honourable
SHRI CHINTAMAN D. DESHMUKH
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Minister for Industry & Supply
Government of India

In order to know anything authoritatively about the cotton textile industry, usually I refer to Mr M. P. Gandhi's writings. Mr Gandhi now proposes to bring out a special publication this year to celebrate the first Centenary of the Indian Cotton Mill Industry. I have no doubt he will give a full picture of the condition of the industry from all aspects. The problems which this industry is facing today are no doubt the problems of Government and of the country also. Solution of these problems requires thorough knowledge of them and the correct approach on the part of all concerned with the industry. At this juncture, Mr Gandhi's publication will be of considerable help to everybody.

H. K. MAHATAB

NEW DELHI

MINISTER FOR FOOD & AGRICULTURE

Dear Shri Gandhi,

I am glad to learn that you are going to bring out shortly a special publication to celebrate the first Centenary of the Indian Cotton Mill Industry. The importance of the Indian Cotton Textile Industry to India's economy needs no emphasis, and its hundred years of existence are certainly worthy of commemoration.

I wish you every success in your enterprise and hope that the Volume will prove to be a useful one both to the Industry and the public as a whole.

Yours sincerely,
K. M. MUNSHI.

Message from
The Honourable
SHRI K. M. MUNSHI
Minister for Food & Agriculture
Government of India

NEW DELHI

MINISTER FOR COMMERCE

I am glad indeed to learn that Prof. M. P. Gandhi is bringing out a Commemorative Volume to celebrate the first Centenary of the Indian Cotton Mill Industry. It is but right that this our premier industry which has had to wage such a terrible struggle in order to come to its own and which has successfully weathered all storms should fittingly celebrate the completion of one hundred years of its useful life. We have every reason to be grateful to Prof. Gandhi for his happy thought and our best wishes are with him for the success of his venture.

This industry is an emblem of the potentialities of our national resources and our latent skill, energy and enterprise. In the setting of today, it should serve as an exhortation to others to take up varied fields of endeavour in order to enrich our national life in every possible way.

I have every confidence that opportunity will be taken at the present moment to tell us all that we need know in the matter of industry in general, not only on the side of organisational success, but also on the side of sympathy and understanding of fellow human beings that alone can help in the true organisation of men in a real brotherhood wherein all are happy in their own work and no one interferes with any other person's work, where all are proud of their own tasks and satisfied in fulfilling them well, where suspicions, bitternesses and jealousies do not mar the even flow of life where each appreciates the difficulties and limitations of another, where in short all are joined together in treading the self-same path for the attainment of the self-same goal.

SRI PRAKASA

Message from
The Honourable
SRI PRAKASA
Minister for Commerce
Government of India

NEW DELHI

MINISTER FOR LABOUR

Dear Shri Gandhi

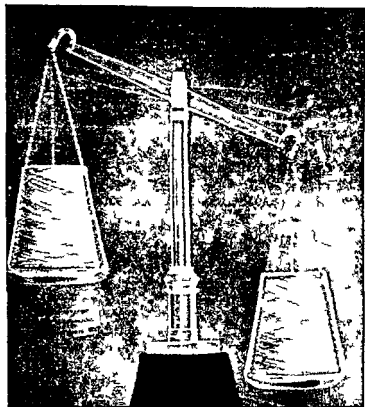
It was with great pleasure that I read of your venture to bring out a special issue of the "Indian Cotton Textile Industry", embodying an account of the achievements of this premier industry of India, during the last 100 years viz. 1851 to 1950. I had occasions to go through some of your publications on Cotton and Sugar and I was highly impressed by your intimate knowledge of these industries. I am confident that coming from you this Centenary Volume will be welcomed by the people interested in the subject and they would also profit by your labour. I wish you all success in your noble mission.

Yours sincerely,
JAGJIVAN RAM

Message from
The Honourable
SRI JAGJIVAN RAM
Minister for Labour
Government of India

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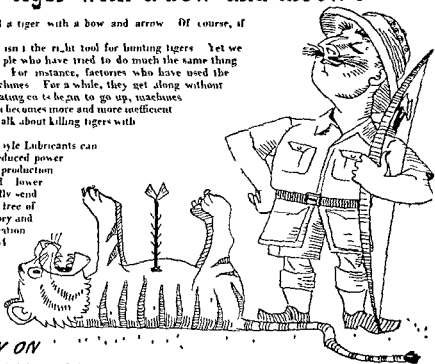
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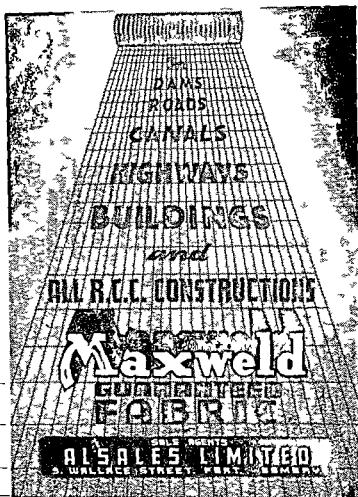
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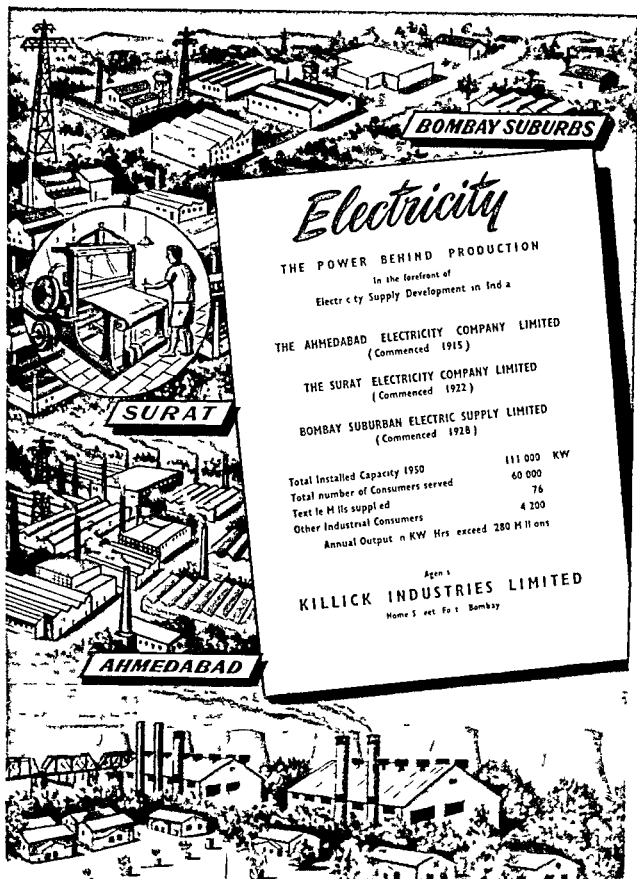
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AHMEDABAD.

The Story of

The Cotton Textile Industry in India

By C H BHABHA,

former Commerce Member, Government of India

IN the economic life of India, the textile industry occupies a high place of pride not only because of its being the foremost indigenous industry of the country, but because of its great contribution, now for just a century, to the wealth and prosperity of the Nation. With a very modest beginning in 1818, this industry has so developed and expanded that it has now assumed a position of international importance. From the point of view of capital sunk in it, the addition it has made to the wealth and income of the country and the volume of labour employed by it, this industry has become the largest organised industry in India. In addition, it has brought in its wake other important trades and has been responsible for transforming the fishing village of Bombay into *Urbs Prima Indis*.

1851—Foundation of the Industry

The year 1818 saw the establishment of the first so-called cotton mill under the name of Bowreth Cotton Mills near Calcutta, started by English enterprise. However, the first Indian textile industrialist was Mr C N Davar, a Parsee merchant with great enterprise, vision and foresight. This idea caught his imagination when he saw the East India Company exporting large quantities of cotton in the year 1850. A year later, Mr Davar, after negotiating a deal with Messrs Platt Bros of Oldham, England, for supply of machinery, selected Bombay for his proposed factory and his dreams were realised when on February 22, 1854, Mr Davar's mill, styled as The Bombay Spinning Mill, actually started functioning at Tardeo with 20,000 spindles. This successful venture was followed up by other enterprising merchants. Bombay became the envy of merchants from Broach and Ahmedabad and soon in 1859 a textile mill was started under the management of Mr Ranchhodlal Chhotalal at Ahmedabad. This fever of enthusiasm spread fast and wide with the result, that, on an average, about 4 mills per year were erected during the last century or so.

It may be of great interest to make a special mention of the fact that the first pioneers of Indian textile industry had not received any technical or academic education and yet achieved success in their new enterprise. They proved not only successful but utilised their success in fruitful channels and founded many public institutions from the profits earned,

which institutions today are a monument to the philanthropic and adventurous spirit of these pioneers.

The products of these factories today cover a wide range and some of the mills are capable of producing a variety of grey, bleached, woven, coloured or printed fabrics to suit both domestic and foreign requirements and these stand in favourable comparison in quality with the best imported materials from England.

1860-90

The industry has passed through many vicissitudes—periods of prosperity alternating with adversity. The period from 1856 to 1860 was quite a good and prosperous quinquennium. In 1861 the outbreak of the American Civil War gave a further fillip to the industry but with its cessation followed a slump. The revival thereafter was slow, for with the demise of the enterprising pioneers who were men of integrity and vision, management of various successful units passed into unworthy hands of the heirs of these stalwarts. Nepotism, neglect, incompetence, misapplication of funds, misconduct and other evils which recurred at a subsequent period, too, characterised those new managements. This led to a deterioration in the affairs of textile concerns, and this tendency was accentuated during the great plague and famine of 1898.

The Turn of the Century

In the closing years of the last century, the City of Bombay was the most prominent textile mills centre and continued as such for a few more years. In its eighty odd mills were installed about 25 lakhs spindles and 25,000 looms. These figures constituted 50% of the total spinning and weaving capacity of the other 125 mills located in various parts of India. Today Bombay has 65 mills accounting for 28 lakhs spindles with a considerable increase in the number of looms to 65,000. The all India figures, including Bombay City, are 422 mills, 104 lakhs spindles and 202,000 looms.

Fifty or sixty years ago Bombay mills used to produce 7 to 8 lakhs bales of yarn for the China market because the competition from the very small number of mills in the Far East was negligible. This business was fairly profitable

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1900-1914

The great famine of 1900 which overtook Western India caused an enormous scarcity of cotton and many of the Bombay and Ahmedabad mills had to close down for long periods. In the first four years of the new century the industry struck a bad patch, some of the weakly financed concerns came under the hammer and were sold lock, stock and barrel for anywhere between Rs. 2 to Rs. 5 lakhs. A repetition of this depression was again witnessed in the thirties when again a good many well known mills changed hands at ridiculously low figures or were scrapped at cast iron value.

World War I

With the beginning of World War I in 1914 the primary reactions in this country were of a panicky nature and the

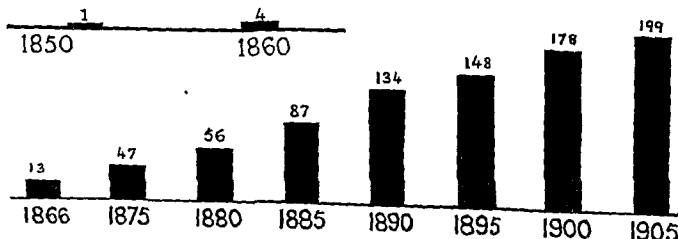
textile industry was accordingly affected. Irrespective of the supply and demand position, prices of cotton, yarn and cloth slumped to record low levels. Bankers became extremely diffident and even loans advanced by them on a safe and secure basis were called in. With great difficulty the industry survived this first shock. Then came the turning point. Shipments of cloth from foreign countries began to diminish owing to the switch over of the transport system to war purposes. Thus the growing scarcity of manufactured goods brought about a substantial rise in prices and boom conditions were reached. Ordinary long cloth which was sold as low as 6 annas to 7 annas a pound, reached the top figure of Rs. 3 per pound and coarse yarns from 4 annas to over a rupee. Cotton prices assumed a firmer tone as foreign mills were on intensive war work for supplying materials to the Defence Forces. India's contribution in this direction was also considerable. Between 1918 and 1921 the Indian mills made record profits. On the stock exchange, scripts of mills companies and of other industrials were quoted six and seven times over the par value, while only five years before the shares of many companies were unsaleable even at a discount.

1922-37

The ebb of the tide started from 1927 and for the next fifteen years the industry was in the doldrums. Although in the city of Bombay no new mills had been put up since 1915 or 1916 the effects of depression were felt more in this quarter than in other parts of India. No less than a third of the Bombay mills either changed hands or were scrapped. During the War some of the millowners had sold their concerns at as high a price as Rs. 50 to Rs. 60 lakhs.

1851-

GROWTH IN NUMBER OF MILLS



These could again be had at a tenth of the price. Bombay labour had to go without work for a considerable length of time and prolonged strikes were the feature of those days. Shareholders had to go without dividends from a majority of mills and share values slumped heavily. Managing Agents not only did not earn their commissions but had to pay up losses to banks as guarantors. Bombay felt the full blast of the world wide depression which started from the US in 1930. But during this period the industry made rapid strides in upcountry centres and especially in Indian States where it could operate at a greater advantage owing to cheap labour and proximity of cotton fields and of consuming markets for manufactured goods.

World War II

The great depression of 1930-31 was gradually coming to an end and by 1936 the industry began to show good results till the second World War intervened at the end of 1939. Unlike the commencement of the first World War which had a depressing effect all industries were operating under the influence of a certain amount of optimism engendered by the memory of the boom conditions of the last war. Yarn and cloth prices rose considerably and quotations of shares on stock exchanges were heavily marked up. As disaster after disaster overtook the Allies through the successful onslaught of Germany and Japan in the early stages a note of despondence was visible in almost all business and industries in this country. Considerable setback occurred in the price levels and it was not until the end of 1942 that conditions began to improve. Since 1943 profits of cotton mills soared to record heights and the exorbitant prices

fetched by yarns and cloth put a great strain upon the purchasing power of the public. The quantity of cloth available to them had to be considerably curtailed owing to the Government demands for war purposes. It is estimated that the industry supplied to the Government no less than 3 600 million yards in the war years.

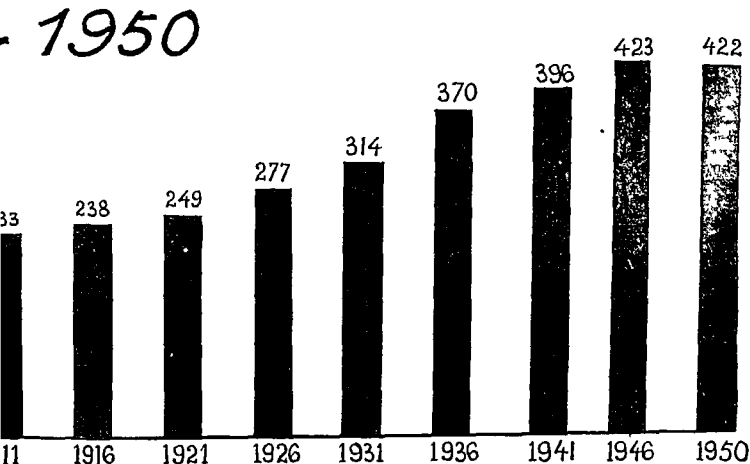
Post-War Years

This state of affairs created new factors. Night work had to be introduced in almost all the mills in India for the purpose of speeding up production. Prices of manufactured goods had sky rocketed and profiteering was rampant. Owing to war exigencies the supply of cloth to the civil population had to be rationed. Control over production distribution and prices had to be introduced by Government stepping in. This task was entrusted to a newly created Government department under the Textile Commissioner assisted by various committees of non-official experts. Now that conditions are becoming more normal owing to the disappearance of the seller's market in textile goods and cessation of war demands it is to be hoped that controls will be minimised as far as possible.

Having had a quick historical survey of the industry, it would be of interest to consider other problems which have vital correlation with this premier industry of the country.

Lancashire and India

Fifty years ago Lancashire mills were the principal caterers of cloth for the Indian markets to the extent of 5 000 million yards annually. The quality and reputation



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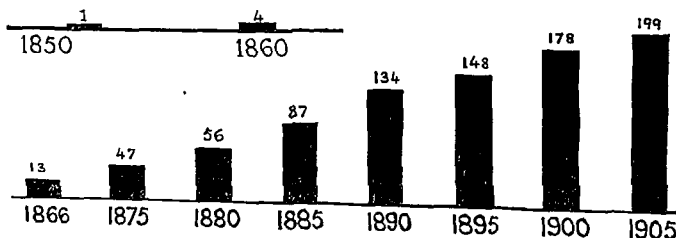
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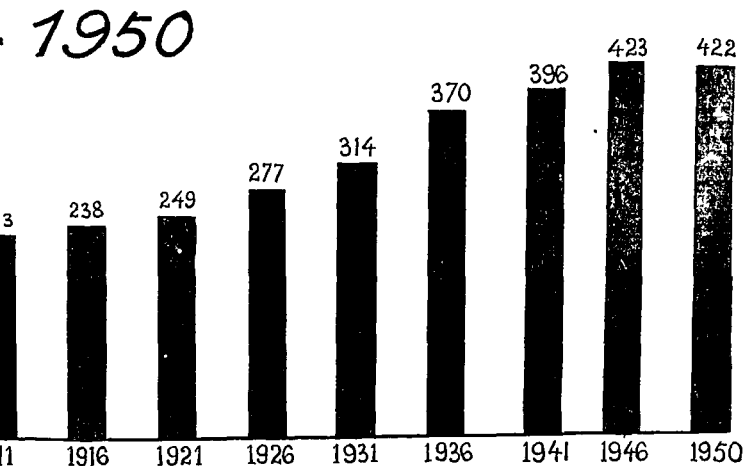
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Having had a quick historical survey of the industry, it would be of interest to consider other problems which have vital correlation with this premier industry of the country.

Lancashire and India

Fifty years ago Lancashire mills were the principal caterers of cloth for the Indian markets to the extent of 5 000 million yards annually. The quality and reputation



of their fabrics were a by word in this country. But Indian mills have progressively taken their place by the weaving of finer cloth to a very great extent and are now importing foreign cotton totalling seven to eight lakhs of bales annually for their production. Lancashire was always an expensive producer and the imposition of import duty plus freight charges have made the Indian market unprofitable for her. A considerable amount of ill will had been created in this country owing to the British Government forcing upon Indian mills an excise duty of $3\frac{1}{4}\%$ on all cloth made by them. Economically speaking the duties were hardly injurious. But its political repercussions were extremely grave. They were looked upon as a badge of India's servility to a conquering Power. The boycott of Lancashire goods and their bonfires became a regular feature. It was not till long after the end of the first World War that this duty was abolished. In the meantime irreparable harm was done to the good relations between Britain and India.

Lancashire did try to make some amends later on when the Indo-Lancashire Pact (also known as Mody Lees Pact) pledged Lancashire to act as India's attorney in those Colonial and Dominion markets in which India had established connections, and even went so far as to agree to obtaining a quota in any Empire market for the Indian mills in the event of the latter having no quota of their own. It is true that in return for this India allowed a small set off in the prevailing cloth and yarn duties on imported British goods. The march of events leading to the second World War made this pact practically a dead letter.

Japan and India

The rise of the industrial power of Japan proved at one time a grave challenge to the textile industry of this country. Her textile industry during the eighties of the last century was in its infancy and it may be of interest to learn that several Japanese apprentices were allowed by the late Mr J N Tata at his Swadeshi Mills in Coorla. With the attainment of an unusual amount of efficiency through large combines, cheap and rationalised labour, special concessions for transport of Japanese goods in Japanese bottoms and a ruthless dumping policy in her export market, Japan became the terror of the textile manufacturers of the world. Duties were raised against her, and quotas were rigidly fixed. Fortunately for the industry the disaster which overtook Japan in the second World War has for the present clipped her competitive power. She is no longer the mistress of a large number of textile mills which she ran in China. Many of her own concerns in her home land have been blitzed. However, the Japanese textile industry is being put on her feet again under American tutelage and it remains to be seen how far she will be allowed to compete within the markets of the world. Already the world's manufacturers are entering a caveat against indiscriminate production of the Japanese mills. It may be mentioned here that Japan gate crashed into the Indian markets in the thirties to such an extent that the Government had to ration the annual imports to the maximum of 400 million yards a year.

In one respect Japan was very foresighted. She believed in the efficiency of her ocean transport system so that she could capture the markets of the world through Government subsidised freights for cotton and manufactured goods. Along with her textile industry there grew her shipping

industry. Even 50 or 60 years ago she possessed an excellent fleet of steamers which were operated by the N.Y.K. and O.S.K. In those days only Jamshetji Tata could force the terrific handicap to Indian industries in the absence of her own shipping line. He saw how the P & O, the British India and other Continental lines were fattening on Indian trade. The freight item on yarns to China, even in those days of cheap prices of Rs. 100 to Rs. 150 per bale, was not less than Rs. 14 to Rs. 19 per cubic ton. When Mr. Tata started negotiating with the Japanese lines for Indian participation in their ships, an ugly freight war reared its head. The threat of its reduction to Rs. 1 per ton by the European lines broke the back of Tata's enterprise in which he was willing to sink a large sum himself. His agreement with the N.Y.K. came to naught. His idea of starting a new Tata line with two steamers which he had already bought in England was knocked on the head and the foreign lines were able to restore the old excessive freight charges. Without Indian shipping, a great handicap has been imposed upon the exports and imports of piecegoods, cotton and other commodities, and it has not been possible to earn foreign exchange for helping the country's economy.

Labour

A word about the labour in this industry seems quite vital. Long years of exploitation, unsatisfactory housing conditions and the prevalence of illiteracy have embittered its relations with the employer. Unfortunately no economic guidance has been given to the workers by the heads of the various Labour Unions. Leadership is lacking in technical knowledge and practical experience of working in mills with the result that constructive suggestions have never been put forward and the workers more than the employers have suffered. Communism and nationalisation of industries with the workers as the bosses are the prevailing slogans. Rationalisation by which each labourer could earn more through minding more machines has been stoutly resisted by the union leaders and even a policy of "go slow", "work less" and "earn more" has been vehemently advocated. Take the case of Japan. Over 25 years ago this country had 250 mills installed with 72 lakhs spindles and 133,500 looms, employing 230,000 workers. At the beginning of the second World War the number of mills had increased to nearly 380, the number of spindles to nearly one crore, and looms to two lakhs. But the number of workers had gone down from 230,000 to 190,000. Today the number of mills in India and Pakistan is 420, spindles 10,400,000, looms 202,000 and the average number of employees on a day shift basis alone is close upon 5 lakhs. By the reduction of our labour force we shall be in a position to raise individual wages and at the same time effect a saving in working costs. We can also give better amenities to labour and extend our welfare programme in each mill with its reduced number of workers. Every new mill should rigidly adhere to rationalisation of labour because it will be in the fortunate position of not discharging workers but of recruiting them.

The practice of computing the percentage of labour costs on the total value of manufactured goods is a fairly good yard stick for comparison. But a fallacious conclusion can be easily drawn. In a purely spinning mill which produces yarns for sale, the ratio of wages to the value of output is

Contd. on page 11/12

Renaissance of The Indian Cotton Textile Industry

By Dr. S. S. BHATNAGAR, F.R.S., Director of Scientific & Industrial Research
and

Dr. S. D. MAHANT, Ph.D., F.R.I.C., Industrial Economist

UNDOUBTEDLY the Indian textile industry is one of the national ventures which has come to occupy a place of pride and importance in our economy. This is a development for which we should be beholden to those pioneers who foresaw the possibilities a century ago and gave us the necessary good start. Their foresight has enabled us to regain, at least partly, the position which India had been occupying in the textile world before the advent of the British. The story of the slow languish and practical extinction of the textile industry in the early days of the East India Company is well known and need not be recapitulated here. It is a matter of considerable satisfaction that India is again emerging as an important factor in the textile world and the centenary of the renaissance of the textile industry is happily coincident with the establishment of an export market for Indian textiles. This is a happy position but considerable effort is needed to consolidate the gains and secure fresh fields. For this purpose it will be necessary to consider steps so that Indian textiles are able to maintain their excellence and set standards for other countries to follow.

Three Urgent Factors

Indigenous supplies of long staple cotton, an indigenous dye stuffs industry and broadening of outlook to adoption of new techniques are three essential factors which demand the urgent attention of textile industry to ensure for it a healthy growth. All the three are of equally urgent importance and it is not possible to give any priority to one over the other.

Long-Staple Cotton

The textile industry is fully aware of the results of our efforts in the past to evolve new varieties of cotton having a longer staple. The successful evolution of what have come to be known as American, 28gF, narma and other similar varieties is well known. These improvements in Indian cotton which accrued as a result of long research were of considerable assistance in the stabilisation of the Indian textile industry and although a major portion of the areas where they were successfully cultivated has passed to

Pakistan, it should be possible with some effort to evolve new strains with the necessary length of fibre so that India is able to meet a substantial portion of the needs of her industry. This is a long term development the economic importance of which cannot be over-emphasized. Considerable thought will be required in co-ordinating and dovetailing the production of cash crops like cotton and jute with food crops to ensure an all round self sufficiency. It is a matter of some satisfaction to know that importance of this subject is being appreciated all round and it is to be hoped that with time a satisfactory solution of the problem will be found.

Dye-stuffs Industry

The establishment of an indigenous dye stuffs industry is another matter requiring the attention of the textile industry. Our annual imports of dye stuffs of different kinds are of the order of 12 crores of rupees and the textile industry is the largest single consumer, in fact the only consumer worth the name. India has ample resources of coal of which considerable quantities are converted into coke for the steel industry and coal tar from which some of the basic raw material for the dye stuff industry are derived, is obtained as a bye product. With the projected expansion of the steel industry, still larger quantities of coal tar will become available and it is in the national interest that these valuable products should be utilised to the best advantage. Some years ago, a Tata ICI combine was expected to take up this important venture but for some reason or other the scheme has not materialised. The textile industry has abundant financial resources at its command which should be pooled together to set up a dye-stuffs industry in India. Being in a position to command all the technical assistance required, a development of this nature is in the interest of the textile industry itself. It is for the leaders of the industry to devote time and thought to this matter and ensure speedy steps in the right direction so that in times of emergency, the industry can rely on obtaining its requirements from indigenous sources. Active planning and development of the dye stuffs industry is a matter of vital importance and the textile industry should take up its consideration without delay.

Broadened Outlook

The broadening of outlook is as essential as the other considerations mentioned above and it is for the industry to take the necessary steps to ensure that the latest advances in manufacturing technique are adopted by them. The mill owners have a special duty in this regard for any neglect or inattention to possibilities and adoption of new developments will mean stagnation and as is well recognised stagnation is synonymous to a slow and painful death. We have to be sure that the fate which overtook our textile industry in the eighteenth century does not overtake us again. The forces of world competition will always be attempting to engulf us and it is for us to make certain that we keep our head high above the danger level. This is only possible by promotion of research for it is research alone that opens up new vistas of knowledge and leads to developments on which the long range prosperity of an industry depends.

Textile Research

A foretaste of the vast possibilities that research offers has been available to the textile industry for some time and it has already considerably benefited from some of the researches conducted at various research institutes. One of the items that can be mentioned in this connection is the bhilawan coating of textile mill bobbins. The bhilawan enamel evolved in the laboratories of the Council of Scientific and Industrial Research has been shown to impart strength to bobbins manufactured from Indian woods, thereby multiplying their useful life several fold. The President of the Bobbin Manufacturers' Association has testified that considerable savings have accrued to the textile industry as a result of this development alone. Further adoption of the practice may make it possible to do away with the import of foreign bobbins and shuttles.

Disposal of Textile Wastes

Like other industrial nuisances the disposal of waste waters of textile mills presents a problem. The large volume of these waters cannot be easily absorbed in the earth or mixed with municipal sewage for the chemicals present in the water have a tendency to destroy even the beneficial living organisms, thereby interfering with the practical utility of municipal sewage works for agricultural purposes. It is consequently necessary to evolve a method of treatment which will result in eliminating the nuisance and if possible ensure its profitable utilisation. A scheme of research financed by the Council of Scientific and Industrial Research has been instrumental in finding a solution to these difficulties and the results of laboratory trials have been successfully repeated in large scale trials at over a dozen mills at Ahmedabad. Ways and means of ensuring a general adoption of the practice are now under consideration.

Tamarind Seed Powder

The development of tamarind seed powder as a sizing material represents the successful utilisation of a waste product and is therefore of considerable economic importance to the industry. With the current acute shortage of foodstuffs in the country, the early likelihood of maize and other food material becoming available for production of starch size cannot be easily foreseen and the use of substitutes is there-

fore an imperative necessity. Tamarind seed powder developed at the Forest Research Institute, Dehra Dun, has successfully filled the gap and helped the industry in a time of grave emergency. There are no reasons why the use of this material should not secure a permanent place in industrial practice. It is true that difficulties have been experienced in securing a uniform quality of the powder and the activities of some disreputable manufacturers, who in order to make quick money have been supplying indifferent qualities of the powder, have tended to bring it into disrepute but that is no reason why a useful material should be discarded. Any difficulties attendant on its use are of a minor nature and could be easily overcome.

Textile Research Institutes

It is a happy augury to be able to say that according to evidence available some sections of the industry at least are alive to the importance of research and have already taken preliminary steps in the right direction. In this connection reference may be made to the formation of the Ahmedabad Textile Industry's Research Association at a cost of over Rs. 50 lakhs to the Ahmedabad Millowners, the Government of India having made a contribution of Rs. 19 lakhs for the purpose. It is gratifying to record that these movements for industrial research associations in India were first strongly advocated by the Council of Scientific and Industrial Research.

The objects of the Association are to establish a Textile Research Institute and to undertake, carry on or help to carry on research and other scientific work in connection with the textile trade or industry and other trades or industries allied therewith or accessory thereto, and which will among others include research in the following directions —

- (i) Investigation into manufacture and improvement of materials used in the textile industry and other trades or industries allied therewith and developing new ones for manufacturing, testing and recording purposes
- (ii) Investigation into utilisation of the products of the industry
- (iii) Investigation into improvement of various machinery and appliances used by the said industry and other trades or industries allied therewith and developing new ones for manufacturing, testing and recording purposes
- (iv) Investigation into and improvement of various processes of manufacture with a view to secure greater efficiency, rationalisation and reduction of costs
- (v) Investigation and research into the conditions of work, time and motion studies, fatigue and rest pauses, standardisation of the methods of work, conditioning of factories, and diseases and accidents arising specifically out of employment in a textile mill

The Need for Standardisation

The primary need of Indian industry in general and textile industry in particular is the standardisation of raw material as well as processing and finishing so that the consumers in India as well as in foreign countries may be sure

of getting a material on which they can rely. This is an essential requirement to which the industry has to devote considerable attention, constituting as it does the touch stone, by which the industry will rise or fall. The Textile Research Institute, Ahmedabad, will have an important role to play in helping the industry in improving their processes and products to ensure production of uniform quality material. This is only one direction in which the industry can hope to benefit from research. There are many others that will follow the active working of the research institute.

Research in Industry

This realisation of the importance of research for the promotion of industry is not restricted to the cotton textile industry alone. The sister jute industry which is of as great a national importance as the cotton industry, some years ago established the Indian Jute Mills Research Institute, Calcutta, and has been financing it from voluntary contributions. Last year the Silk and Art Silk Mills collected a sum of Rs. 15 lakhs towards the formation of a research association for their industry and their research institute is being established in Bombay in the near future. The Indian woollen industry is also said to be considering a project for the establishment of a research institute which will assist it in solving its difficulties. These developments are indicative of the fact that the textile industry is fully alive to the benefits that will possibly accrue to them by promotion of research.

Collective Buying

Amongst methods to promote economies in the industry may be suggested the system of collective buying for the industry as a whole. In normal times even, collective buying is a vital factor in obtaining special terms from sellers and results in considerable savings. In times of emergency and particularly the abnormal times through which we are passing, the system assumes an added importance for while adding to the bargaining powers, it also ensures other incidental savings in buying charges, freights and insurance and the advantage easily mounts upto 15 to 20% if not more. This is not a small saving and the adoption of the practice would help in considerable savings of foreign exchange.

The future of the textile industry is a matter of national importance and is closely interlinked with its expansion on sound technical and economic lines. The long term possibilities are immense and will be limited only by our abilities to grasp them. It will be necessary to take a long term view in all matters rather than have a feeling of complacency that the present position can be easily maintained. Rationalisation and a watchful eye, open and rather keen to adoption of every useful development, can alone help to ensure for the Indian textile industry the lofty stature which is visible in the horizon of the future and which it should be the aim of this industry to attain.

THE STORY OF THE COTTON TEXTILE INDUSTRY IN INDIA

Continued from Page 1

round about 10%. In the case of mills which spin yarn for weaving them into cloth it is anywhere between 25% and 30%. Theorists may mistakenly argue that labour is underpaid in a spinning concern. This is not so. There, fewer processes and a lesser number of men have to be employed. Cotton alone forms almost 70% of the value of the output, while stores and power take up another 8% to 10%. In a weaving concern the cotton ratio is anywhere between 35% to 45%. The finer the count the lower becomes this ratio. Another 10% or 15% have to be provided for stores and power. Owing to a larger number of workers employed on a larger number of processes the wage bill is naturally higher and therefore its ratio is also correspondingly more. It is a fashion among labour leaders to state that an average 20% labour ratio to the total value of output is a minor item and is capable of further increase. This is utterly wrong because cotton, stores, power, dyes and chemicals running altogether as high as 50% to 60% of the value of the output have to be provided for and out of the balance 40% to 50% a wage bill amounting to 25 per cent or 30 per cent has to be debited. This leaves a small surplus for overhead charges like interest, insurance, rates, commissions, profits and dividends.

During the last quarter of a century or so, while other fibres have come on the scene, King Cotton has still been able to retain its importance and with it too, the textile industry. Unfortunately for us here in India we seem to be too slow in appreciating the value of research. If our textile industry has to continue successfully, it is urgently

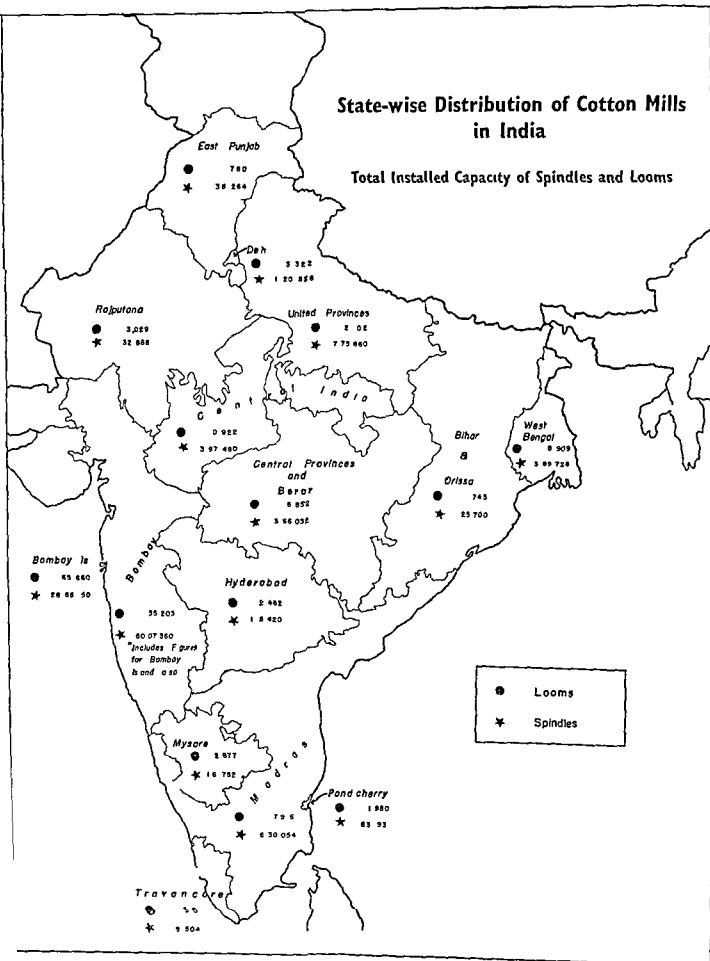
necessary that our industrialists think more in terms of adaptation to new changes in processes, varieties, methods etc.

The low per capita income in India coupled with climatic conditions and habits in many parts of this sub continent ensure a valuable and growing market for the Indian textile industry. In addition to the home market the sky alone would be the limit for exports in our neighbouring and natural markets, provided a systematic survey of export requirements, prices, etc. is made, and a dynamically organised effort, as was done by Japan two decades preceding the last World War II, is undertaken.

For the continued progress and prosperity of the Indian textile industry, cordial labour and employer relations and efficient progressive and honest management seem essential prerequisites. Both these can only be ensured by proper supervision and guidance from Governmental quarters who whilst holding an even balance in judging textile questions, should at all times weigh and place the larger interests of the country above everything else. The recent history of textile management has left a bad odium. But, the abnormal times we pass through can to an extent be blamed for certain deeds and misdeeds. However, forgetting the past and thinking of the future of the Indian textile industry one feels, that, instead of idealistic planning for nationalisation or unhealthy interference or control, a proper supervision and guidance from the Government will prove highly beneficial to all interests concerned.

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The INDIAN COTTON TEXTILE INDUSTRY

—ITS PAST, PRESENT AND FUTURE

By Dr. N. S. R. SASTRY,

MA, M.Sc., Ph.D. (Lond.), F.S.S., Director of Statistics, Reserve Bank of India

IN the sixteenth and seventeenth centuries the superfine hand made muslins and calicos produced in India were world famous and were very popular in the households of nobles and even kings and emperors of the European countries. In fact, trade in the above fabrics attracted the businessmen of these nations to this country which ultimately resulted in its subjection by foreign powers. The foreign domination resulted in ruin of the industry as it had to make way for the cheaper imports of machine made goods of these countries after the industrial revolution. There is no use speculating on what would have happened to this industry had India remained independent. It is an interesting fact that the establishment of the textile industry on modern machine lines and its further growth followed the course of the spread of the nationalist movement. No doubt, the high profits made by the cotton merchants during the American Civil War in the second half of the nineteenth century, the enterprise shown by certain businessmen in taking risks of establishing mills in the face of opposition of established factories in Lancashire, the lucrative trade, specially in coarse yarn, that developed with China and Japan, and the natural factors which were conducive to the development of this industry, particularly round about Bombay, were important factors for the growth of the industry in the earlier years. In fact, these aroused the jealousy of Lancashire industrialists, who used their political influence to impose excise duties on this infant industry to counteract the small revenue duties imposed on their imports and who further encouraged the enactment of various labour and factory legislations to reduce the competitive advantages in the lower costs in wages, etc. However, as will be seen in the following few paragraphs, developments at least during the present century coincided with various nationalist movements namely, the Swadeshi Movement of the first decade, the non-co-operation movement of the twenties and the civil disobedience movement of the thirties. The two World Wars also had their own

impact on this industry. A brief survey of the progress during the present century is given below

1.

The following table gives the number of mills, spindles and looms as also the total production of yarn and piece goods in India (undivided) in certain years between 1900 and 1946

Year	No. of mills	No. of Spindles ('000)	Looms ('000)	Millions of lbs.	
				Yarn	Piecegoods
1901	178	4841	405	873	120
1906	199	5270	575	654	165
1911	233	6095	858	625	267
1916	238	6469	1121	691	378
1921	249	7278	1335	694	403
1925	277	8189	1846	807	533
1931	314	9678	2552	966	674
1936	379	9721	2978	1054	782
1941	398	10000	2992	1277	1093
1946	423	10354	2927	1339	947
1916 with 1901=100	(237%)	(214%)	(500%)	(231%)	(783%)

It will be noticed from the above that during the period of nearly half a century the number of mills and spindles more than doubled themselves, while the number of looms increased five fold. The production of yarn more than doubled whereas that of piecegoods increased to nearly eight times that of the earlier period. This shows the rapid advances made by the industry. The differential rates of increase in the production of yarn and piecegoods is due to changes in certain circumstances. In the last quarter of the nineteenth century and in the early years of the twentieth, India enjoyed a lucrative trade in yarn specially of the coarse variety with China and Japan. With the rapid progress made by the industry in these countries, specially in

Japan, India not only lost her trade, but required heavy protective duties to guard against the inroads made by the cheap Japanese goods in the Indian markets. To make good this loss the Indian industry had to develop the Weaving Branch and thereby capture the internal market at the expense of the British industry which established itself over a very long period. The natural factors, the political factors mentioned above and the indirect help given by high revenue duties imposed during the first World War were important factors which assisted this growth. But during the early twenties, competition from the U.K. which was abruptly cut off during the Great War revived and, mean while, Japan who strengthened her competitive power during this war, flooded the markets with very cheap goods. The unwise financial policies followed by the mill managements added to these difficulties and there was virtual threat to the whole industry. This brought about a great wave of public feeling and the government were forced at first to suspend and finally in 1926 abolish the obnoxious excise duties. Further a Tariff Board was constituted to examine the question of the need for protection or other form of assistance. The members gave divided advice and the government did not accept the recommendations of the majority. This brought about a crisis between management and labour in Bombay when attempts were made to reduce costs by schemes of rationalisation and reduction of wages. Later the Government adopted the policy of Imperial Preference and gave protection against Japanese imports by differential duties and the higher revenue duties necessitated by the budget deficits of the early thirties gave indirect protection. In 1932, another Tariff Board appointed to investigate conditions in the industry recommended protection. This gave a good fillip to the industry in the subsequent years. The two Great Wars gave different rates of impetus to the industry. At the time of the first World War, India was still in its infancy in industrial life, and stoppage of imports of mills stores and other requisites stifled the expansion during that period. Further, the war was confined mainly to the western theatre and many demands were not made on the Indian industry. But during the period before the Second Great War the industry expanded considerably. This World War having become global, India was used as the base of operations for the Middle and the Far East, and great demands were made for the supply of textile materials. The industry rose fully to the occasion and this explains the greater expansion during the second World War than in the first.

Regional Development

Bombay City was losing ground in yarn production both absolutely and relatively after World War I, but during the recent World War she made good progress in quantity though the relative production increased only slightly. Ahmedabad was steadily gaining ground till the thirties but during the recent war she seems to have lost slightly in relative position though absolutely production continued the upward trend. However centres outside the Bombay Presidency have been consistently gaining ground and improved their relative share from slightly above a quarter of the total to slightly less than half. In piecegoods also similar trends are noticed except for the fact that the absolute production of Bombay was throughout increasing. Further, the relative share of Ahmedabad is much higher and of Bombay

slightly higher than in the case of yarn and consequently the relative share of other centres is smaller. This is due to the fact that several upcountry mills produce only yarn to supply to handlooms.

2

The following table gives the shares of different qualities of yarn and piecegoods in total produce

	YARN					PIECEGOODS				
	20s	16s	12s	10s	Above 40s	Chaddars	Dhoties	Shirts	Coloured	Others
1901-04	83.2	14.9	2.4	0.2	10.7	19.0	28.6	17.3	24.4	
1919-22	67.8	29.5	2.6	0.4	5.7	21.0	27.1	26.0	20.2	
1928-31	59.1	31.8	6.1	2.2	4.1	16.2	24.0	21.7	21.0	
1934-37	54.9	26.8	11.8	6.3	3.2	20.4	24.8	20.3	20.1	
1943-46	61.0	21.3	10.4	6.4	1.7	19.3	23.2	20.4	23.4	
1947-48	60.0	1.7	11.2	9.9	1.3	27.5	23.5	20.1	0.0	

From the above table we find that till the thirties while the share of coarse yarn had been coming down that of other counts had been going up but subsequently while the share of counts below 20s showed an upward trend specially during the World War II that of medium counts 21-30s marked a downward trend and though there was a slight downward trend for finer variety during the war they recovered and advanced after the war. In piecegoods the share of chaddars went down rapidly and that of dhoties increased though there was a reversal of trend during the war and recovery later. The position of shirting and coloured goods stabilised after 1930 and the rest also except during the war when there was a sudden spurt and reduction later.

We may further conclude that India has been expanding her place in the home market by spinning finer varieties of yarn to manufacture dhoties and other kinds of piecegoods. During the war there was more demand for rough cloth, specially for military purposes, and even for civilian standard cloth, but this trend was reversed after the war.

Position of the Industry in the Home Market

The following table gives the percentage shares of Indian and imported piecegoods and handloom products in the total consumption in the country.*

	Foreign	Indian	Handloom
1901-04	67	15	23
1919-22	36	47	22
1928-31	35	43	22
1934-37	15	59	26
1943-46	—	70	30

The above table shows that at the beginning of the present century India depended for nearly two thirds of her requirements of cotton piecegoods on foreign imports and the Indian mills supplied only 15% and the balance the handloom manufacturing piecegoods from yarn either imported or supplied by local mills. The end of the first World War saw the reversal of the trend, the share of foreign imports falling to 36% which was entirely taken by the Indian mills.

* The data are from the Statistical Abstract of India 1948-49, p. 84.

Not much changes could be noticed till 1931. But with the grant of protection to this industry, the share of imports came to 15% and the share of Indian mills increased to 59%, thus within a period of about 35 years their relative positions were exchanged. Handloom production did not gain much in this process. The recent World War completely saw the elimination of imports which are now less than even 1/2%.

Exports

The following table gives the value of exports of piece goods from India

Year	Value of goods (in million rupees)
1901-04	118
1919-21	201
1929-31	219
1934-37	77
1943-46	47

The above table shows that the exports form only a very small part of production in India and they nearly doubled during the first two decades of the present century. This expansion took place mostly during, and immediately after World War I. Afterwards the competition from Japan increased and there was no more further expansion. In the thirties, the country required protection against foreign imports even in the home market and naturally exports dwindled except in some special kinds in which India had an advantage, e.g. demand for lungis, etc. from Indian settlers in foreign countries. During the recent war India had not only to supply all the military requirements in the Eastern theatre but had to supply to the civilian markets in Far and Middle East and parts of Africa which were formerly supplied by Japan and the U.K. This is responsible for the high average of exports in the triennial 1943-46.

From the above analysis we have seen how India gradually expanded her textile industry with the help of several factors and has reached a position when she can meet all her internal demands except in some special lines. Any further expansion can take place only by an increased demand from home or foreign markets. Several planning committees have fixed targets for further increase. The basis for their calculations appears to be a crude method of extrapolation rather than any scientific study of demand. The recent fall in production is attributed to labour troubles and other factors. We have also to take into account the steep fall in military demand for coarse and medium types which is not compensated by the increase in the civilian demand as it is confined mainly to finer types. The recent reimposition of control is attributed to the falling production

and consequent deficiency in supply. No doubt, in the sellers' market business people exploited the greater demand for finer goods even at higher prices during the recent inflationary conditions and this filtered into the prices of more inferior types also. The Government have been taking all possible measures to increase production. At the same time we see the paradoxical picture of overstocking in mills and the consequent closure of some of them. Hence, unless prices come down, effective demand is not likely to increase, specially in some types. This is becoming difficult due to the rigidity in wages, dearness allowances, etc., and the high prices of raw cotton. The partition of India has created further troubles for long staple cotton which has mostly gone to Pakistan,* and the recent devaluation increased the prices of imports from the dollar area by over 40%. In these circumstances, unless some measures for greater efficiency and reduction of production costs are taken, the industry cannot look for expansion even in the home market. In the foreign markets, the position is even worse. India enjoyed a measure of insularity during the war. In fact there are complaints regarding the quality and other specifications of goods supplied. If India has to retain the position when conditions of a sellers' market are gradually giving place to a buyers' market and also when competition from the belligerent countries starts after the transition period of reconstruction, several important measures have to be taken both by the industrialists and the Government. The reputation of high standard in quality and integrity in business dealings should be built up. Exports of piece goods may have to be checked by the Government on sampling inspection plans at the ports of shipment. Ways and means of supplying the requisite quantity and quality of cotton should be found out. The costs of production should be brought down by all possible means with the willing co-operation of the capitalists and labour. The industry should have schemes of research for improved methods in the various factors of production. It is gratifying to note that already one Textile Research Institute is started in Ahmedabad and there are proposals for developing such institutions in other important centres also. Finally, in formulating plans for development instead of following the old time rule-of-thumb methods we should be guided by results based on proper marketing research studies regarding effective demand, competition from substitutes, dispersion of industry and other factors on the lines now in vogue in advanced industrial countries. The State should also give a proper lead to the industry by affording necessary facilities and encouragement but at the same time keeping a watch that they are not misused. Otherwise such difficulties which Bombay felt during the twenties of this century may recur in other industrial centres to the detriment of the economy of several regions.

REGIONAL DEVELOPMENT OF THE Indian Cotton Textile Industry

By Dr N. S. R. SASTRY

THOUGH the first cotton mill was established in India as early as 1818 at Fort Gloster near Calcutta, the true foundations for the development of this industry were laid in 1851 by the floating of the Bombay Spinning and Weaving Mill. In those years of free trade the essential requirements for the success of any industry were the availability of power, raw materials, finance and managerial ability to stand the competition of established competitors from abroad. Some shrewd business people realised that it would be more remunerative to manufacture the cotton produced in this country for local needs and trade with neighbouring countries rather than export the raw materials to the U.K. and import the finished goods thereby incurring heavy freight charges. In those early years manufacture was naturally confined to only coarse varieties of yarn and piecegoods where the advantage of these freight charges was highest. Calcutta and Bombay were the focal centres for trading and both of them had the advantages of entrepreneurs for promotion of industry. Though Calcutta was favourably situated for power resources, having been situated very near the coal fields, Bombay had the hydro-electric power and also could import coal cheaply from abroad. The deciding factors in attracting the cotton industry to Bombay seem to have been the humid climate and vicinity of raw cotton markets. Further, Calcutta had developed interests in several other large scale industries, namely coal, jute and plantations.

Bombay Leads

The statistical data for the earlier years is very meagre, but the progress made in the later years can be seen from the following table

Year	No. of mills	No. of spindles ('000)	No. of looms ('000)
1851	1	29	—
1866	13	309	34
1876	47	1,109	91
1899	66	1,461	126

It will be seen that in the earlier stages the progress was very slow, and the industry was confined mainly to the spinning operations. Out of the 56 mills in 1880, 75% were situated in Bombay Presidency of which Bombay City claimed the major share, namely 32. It will be noticed that the industry received a good impetus during the American Civil War from the cotton merchants of Bombay who made money by exporting cotton to the U.K. to replace the American imports. The progress in the succeeding years of this century can be seen from the following table

	BOMBAY			OTHER PARTS OF BOMBAY			ALL-INDIA		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
1881	32	923	10.6	10	187	1.6	67	1,811	12.7
1885	49	1,347	12.0	19	293	2.6	8	2,146	16.6
1891	67	1,979	14.3	24	451	4.1	134	3,352	24.5
1895	69	2,124	20.2	33	593	7.2	148	3,810	35.3

(1) No. of mills (2) No. of spindles ('000) (3) No. of looms ('000)

The above table clearly shows the rapid progress that was being made by the industry. Both the number of mills and their capacity doubled up in Bombay, while the other centres were expanding more rapidly with the result that the rate of increase of all India was more than that of Bombay. However, Bombay City and Province were maintaining their premier position. This natural development is to be expected because, with the success achieved and profits made by the industrialists in Bombay, entrepreneurs in the upcountry centres who were more favourably situated than this city in respect of the raw material and the market for manufactures, should have been attracted to this business. Fortunately for Bombay City, a growing trade in these manufactures was developed with China and Japan and this helped to sustain this industry in spite of the growing internal competition. It should further be noted that nearness to raw material is not a primary factor in the location of this industry. Though most of the mills are in the cotton growing regions, there are important cotton belts in the Punjab in the north and the Ceded Districts in the south.

which do not figure in this industry. This anomaly can be understood when we notice that England and Japan, the two leading cotton textile producers of the world, have to depend on imported cotton for their industry. Even in America, the northern provinces were the leading textile manufacturers for a long time, whereas the southern provinces produced the cotton. The concentration of a large number of mills in the same place led to other external economies and all these helped to make Bombay the leader of the industry in the country.

Till 1896, detailed statistics of production were not required to be supplied by these mills and so comparison of the progress in production is not possible. But these statistics give a more realistic picture of the regional distribution of the industry. The following table gives particulars for the subsequent periods.

Production of Yarn (million lbs)

	BOMBAY	AHMEDABAD	REST OF BOMBAY	REST OF INDIA	Grand Total Production
	Production of Grand Total	Production of Grand Total	Production of Grand Total	Production of Grand Total	
Average					
" 1901-04	328 57	45 8	46 8	109 27	576
" 1911-14	319 52	58 10	52 8	196 30	665
" 1919-22	336 50	79 12	53 8	185 30	633
" 1928-31	228 29	130 17	65 8	355 48	781
" 1934-37	282 27	169 18	77 8	510 49	1038
" 1937-40	329 27	187 16	83 7	634 51	1233
" 1944-47	465 30	205 13	101 7	781 50	1653

Production of Piecegoods (million yards)

	BOMBAY	AHMEDABAD	REST OF BOMBAY	REST OF INDIA	Grand Total Production
	Production of Grand Total	Production of Grand Total	Production of Grand Total	Production of Grand Total	
Average					
" 1901-04	293 54	102 19	47 9	99 18	541
" 1911-14	618 53	259 21	87 8	209 18	1173
" 1919-22	574 52	312 23	125 7	250 17	1651
" 1928-31	798 35	843 29	175 8	675 29	2291
" 1934-37	1130 33	980 28	213 6	1171 33	3513
" 1937-40	1,352 33	1,069 26	244 6	1,456 35	4122
" 1944-47	1514 34	1,017 23	295 6	1,634 37	4431

From the above tables we find that in the beginning of this century Bombay Presidency accounted for more than 70% of the production of yarn and over 80% of piecegoods. Of the former, the shares of Bombay island and Ahmedabad were 57 and 8 and of the latter 54 and 19 respectively. Since then till the end of the Post War I triennium there had been a slow but persistent fall in Bombay's share in yarn, which was shared between Ahmedabad and other up-country centres. But still it continued to be the chief producer with a share of more than 50%. Bombay's loss was chiefly due to the loss of export trade in yarn with China and Japan, and the increased production of piecegoods, could not fully compensate this loss. In piecegoods it did not lose much ground because there was an expanding market for indigenous production in competition with imports.

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But after this period, several new factors influenced the dispersion of the industry away from Bombay. The change in the direction of Bombay's trade from foreign to internal markets weakened its advantage in transport costs. Unfortunately for Bombay, about the same time the railway rates were revised from low rates over long distance from ports to a more equitable basis according to the distance travelled and this still further weakened its position in the internal markets. Again in Post War I period, rents, taxes, water rates and other charges for municipal services were raised in that city, and these contributed to an increase in that centre. All these factors tended to increase the burden on the industry in Bombay, and the situation was accentuated by the revival of imports from Lancashire and new competition from Japan. Ahmedabad and other inland centres had the advantage of lower freight charges for raw materials and finished goods, and the rents, taxes, and labour charges also were lower there. Again, the development of electric schemes in Madras and the United Provinces gave a fillip to this industry in those centres. Of all the inland centres, Ahmedabad came out best for several reasons. It is near the cotton growing tracts, specially of the medium and long staple varieties, and has a big market in the neighbouring regions of Kathiawar, Gujarat, the Punjab, the United Provinces, Delhi etc. It has, in addition, managing agents who confined their activities to a limited number of concerns and hence had more time to pay personal attention to many details. Fortunately, it could command a labour force which was more steady and less militant than that in Bombay. Also as most of the mills in Ahmedabad were newly established the machinery was modern and superior to those in Bombay.

With the growth of the external and internal competition many of the mills in Bombay came to trouble, and after 1923 the managements tried to reduce their costs at the expense of labour. This led to a series of labour strikes of greater or lesser intensity culminating in the great general strike of 1928-29 which shook the foundations of the industry in that centre. Ahmedabad and other inland centres seized this opportunity and increased their production at the expense of Bombay. By the end of the triennium 1928-31, Bombay's share in yarn came down to 27% compared with 57% in the beginning of the century, Ahmedabad's share increased to 17% from 8%, and the share of other parts outside Bombay Presidency increased to 46% from 27%. In piecegoods, the respective percentage shares were 35 and 54, 28 and 19, 29 and 18. Whereas all other centres increased their production of yarn to nearly three times that of the earlier period, Bombay's share came down by nearly a third. In piecegoods, whereas other centres increased their production by nearly 6 times, Bombay could increase it only by 3 times.

During the thirties the fall in the share of Bombay slowed down considerably, whereas the increase in the share of Ahmedabad was arrested and even fell by a point just prior to the war. But during the World War II, both in yarn and piecegoods, the share of Bombay increased at the expense of both Ahmedabad and Rest of India. As this happened in an expanding market provided by the war, it

can be inferred that there was larger surplus capacity in Bombay which could be put to profitable use.

The following figures show the average production per year of different varieties of yarn and piecegoods in the different regions.

Yarn (million lbs)

	Counts 1-20s				Counts 21-30s				Counts 31-40s				Counts above 40s			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1901-04	284	16	34	145	38	21	11	12	3	8	1	2				
1911-12	240	27	30	149	80	45	15	45	5	6	2	3	1	1	1	1
1918-21	186	48	40	228	77	60	19	97	15	15	4	14	6	1	2	2
1924-27	144	66	49	32	84	46	27	122	30	31	4	40	18	24	2	11
1927-31	142	69	48	396	104	46	26	142	63	37	7	63	23	34	2	20
1944-47	293	9	70	484	92	42	21	161	48	33	6	71	30	38	4	23

(1) Bombay (2) Ahmedabad (3) Rest of Bombay (4) Rest of India

The above table shows that till the end of 1931, Bombay was losing heavily in the production of coarse yarn and though the production of medium counts nearly doubled it could not compensate for the loss in the coarse varieties and the production of finer counts was negligible. But other centres were expanding rapidly in all varieties thereby bringing down Bombay's share in the aggregate. The imposition of higher import duties in the emergency budget of 1931 and the granting of Tariff protection to the industry in subsequent years brought about new trends. The fall in the production of coarse yarn in Bombay was arrested, and with the increase in production of medium and finer varieties a good part of the ground lost in the total production was recovered. The share of Bombay remained steady without further reduction. But an important point to be noticed is that as the competition from centres nearer the markets had been increasing, the older centres like Bombay and Ahmedabad had been switching on to superior varieties of yarn. From the table given above it will be noticed that between the triennium beginning with 1928 and the triennium beginning with 1937 Bombay increased its production of coarse yarn of counts below 20s from 136 million lbs to 142 million lbs per year, in counts 21 to 30s from 72 to 104 million lbs, whereas in counts 31 to 40s it increased from 15 to 53 million lbs and in counts above 40s from 6 to 29 million lbs. Ahmedabad showed similar rapid improvement in fine counts and slight improvement in coarse counts less than 20s, in counts 21 to 30s actually lost 14 million lbs, i.e. from 60 to 46 million lbs. Though the mills outside Bombay also showed similar improvement, their share of fine yarn in their total production was much less than that of Bombay and Ahmedabad. World War II, however, slightly changed the trend. The production of coarse yarn increased while that of other varieties was either stagnant or slightly decreased and in the former, Bombay's share was higher than that of other centres. Naturally the relative share of Bombay increased during the war at the expense of Ahmedabad and other centres outside Bombay Presidency.

Piecegoods (million vards)

	DHOTIFS				SHIRTINGS				COLOURED GOODS			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1901-04	19	83	9	17	104	16	17	15	15	—	—	8
1919-22	13	177	41	64	290	107	31	45	338	31	20	60
1923-31	162	251	57	223	262	164	23	126	226	139	58	176
1934-37	331	321	68	436	375	203	37	254	218	312	65	192
1937-40	394	312	80	514	459	218	35	333	251	346	72	250
1944-47	319	244	65	513	448	243	60	412	335	352	81	252

(1) Bombay (2) Ahmedabad (3) Rest of Bombay (4) Rest of India

At the end of World War I, Bombay held a very strong position in the production of shirtings and coloured goods and the production of dhoties was very little. In the twenties, there was heavy fall in the production of coloured goods and slight fall in shirtings compensated by the tremendous expansion in the production of dhoties. Ahmedabad and other centres improved in all lines with the result that the relative share of Bombay came down. Thanks to the Tariff protection in the thirties, Bombay could expand the production in all lines though the increase in coloured goods was very small. During this period, the centres outside Bombay Presidency gained slightly in the relative shares at the expense of both Bombay and Ahmedabad.

During the Great War II the production of dhoties declined both in Bombay and Ahmedabad, and slight expansion was recorded by centres outside Bombay Presidency, the production of shirtings and longcloth was slightly reduced in Bombay City, while in all other centres it increased. However, it was only in the coloured piecegoods that the largest increase took place in Bombay though other centres also improved to a smaller extent.

Conclusion

World War II made great demands on the productive capacity of India's Cotton Textile Industry, and restrictions had to be imposed on the civilian demand as well as exports to neighbouring countries whose supplies from Europe and

Japan were completely cut off at the same time. Deficiency in machinery deprived the country from taking full advantage of the opportunity that arose. Further, the country produces mainly short staple cotton and even before the war had to import large quantities of long staple cotton. The new demand is for finer qualities of cloth which requires more cotton of this latter variety which has to be imported to a large extent from hard currency area. The partition of the country aggravated the situation because a larger part of the area producing the limited quantity of long staple cotton has gone to Pakistan. The unfriendly attitude of that country and the breakdown of trade after the devaluation in September 1949, have strained the industry to a great extent. Efforts are being made to step up production of long staple cotton in the country and to arrange for necessary imports. But in course of time the advantages both in the internal and external markets may be lost from resumed competition from exporters in Europe and Japan. Unfortunately, the trade connections established during recent years are being undermined by the doubtful integrity of certain exporters who are spoiling the fair name of the country. If the export market is lost and competition affects even the internal market, the position of several mills in Bombay and Ahmedabad may be seriously undermined. In recent months several mills closed down for various periods due to piling up of their stocks and the employment position became very precarious. If this malaise develops beyond control it will result in untold misery. In fact on the eve of the war, Ahmedabad was developing the same symptoms as Bombay suffered from, immediately after the boom period of 1919-22, and the demands of war postponed the solution of several problems. The newly established Planning Commission may have to pay serious attention to this great industry if the internal demand does not keep up to the levels of production. In this connection, it should be noted that even if the relations with Pakistan improve, the country has to be prepared for the loss of a big slice of that market, as that country naturally will like to develop its own industry, by exploiting the facilities found in its territory, and may get its supplies from various foreign countries with which it may enter into mutually advantageous trade agreements.

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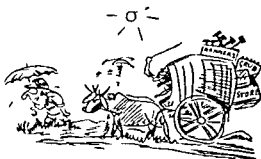
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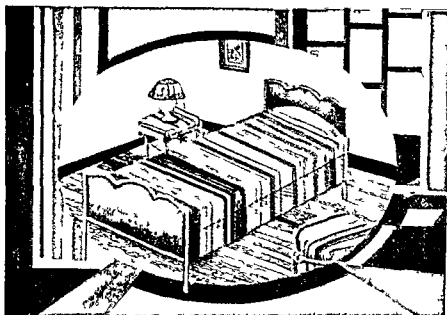
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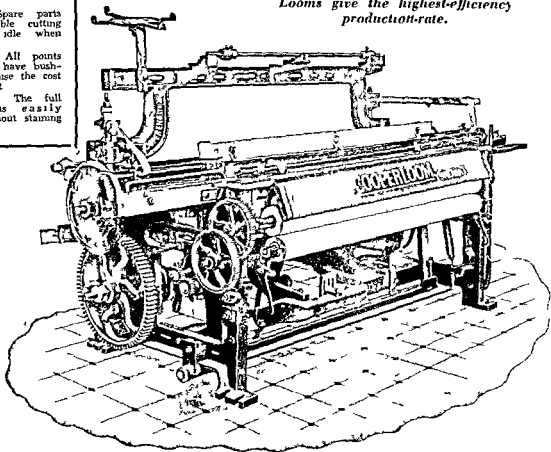
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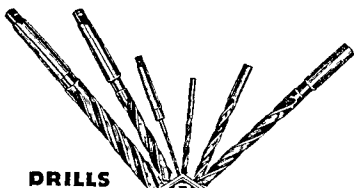
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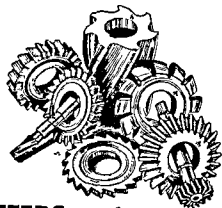
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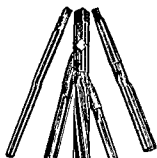
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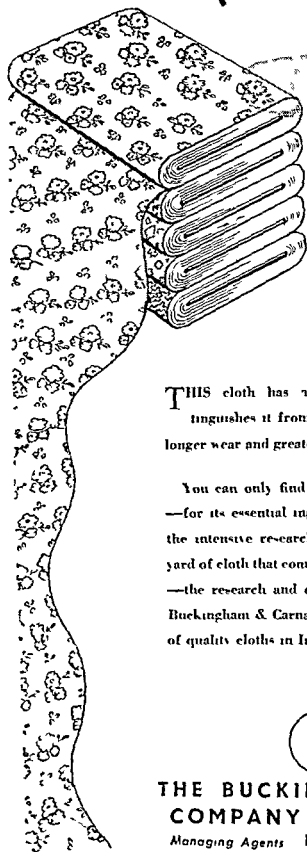
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THE COTTON TEXTILE INDUSTRY OF INDIA TODAY

THE two basic requirements of human beings are food and clothing—food coming first and clothing next. Clothing, therefore, forms an essential part of consumer's goods and is indispensable for human existence in a civilized society. This could not have been true in primeval ages when people lived on leaves and barks of trees but in the present times clothing has assumed a great importance and has become absolutely essential for human life. The importance of the Cotton Textile Industry is therefore obvious to all.

Present Position

Unfortunately the position of the Cotton Textile Industry of our country is not very encouraging today. In 1939 the consumption of cloth *per capita* was about 13½ yards taking into account the cloth produced in the country (mill made handloom and khadi) and the cloth imported from foreign countries. Now, in 1950 that is after a long span of a decade including the period of the second World War the cloth available to our countrymen would hardly exceed 14 yards per head. The figure is inclusive of the home production as well as foreign imports. As the amount of consumption of cloth varies from place to place there being more consumption in industrial areas and less in other areas we can have an idea of the total availability of cloth only on the basis of *per capita* consumption of cloth. I have therefore quoted the *per capita* figures of consumption to enable the readers to form an idea of the total amount of cloth available to our people.

—And Problems

It is true that the *per capita* figure of cloth available in our country today is very low and needs substantial improvement to make our countrymen happier in the matter of consumer's goods. Hence to increase the production of cloth is a problem of outstanding importance. Personally I feel that there is sufficient scope for the uplift of the Indian Cotton Textile Industry and the number of Cotton Textile Mills in the country can be gradually increased thus creating opportunities for more and more employment. Unfortunately on account of the partition which has placed

a large area of cotton cultivation in the hands of Pakistan, our country is faced with acute shortage of cotton. The scarcity of cotton has brought about considerable rise in its price which in turn has enhanced the cost of production of cloth. To my mind the solution of the problem of our Cotton Textile Industry lies in the solution of the following three problems—

- (i) Production of more cloth
- (ii) Production of more cloth at a cheaper price
- (iii) Production of more cotton

Suggested Solutions

These problems have got to be tackled and tackled successfully. In order to have more production the textile workers will have to put in harder work and increase their productivity. Without increasing the productivity level the solution of the first problem viz more production of cloth would be an idle dream. It is equally important for raising cloth production and bringing down its prices that more and more cotton is produced in the fields and is made available to the industry at a cheaper price because so long as there is shortage of cotton shortage of cloth will continue and scarcity of cloth is bound to raise its price level. In view of the acute shortage of raw material there is an increasing demand for Indian cotton. The problem of how to meet this demand is to be tackled scientifically and speedily, otherwise we will have to continue facing the present difficulties for many years to come.

Increasing Cotton Cultivation

To my mind one of the most important means to solve the problem is to increase the area under cultivation of cotton of improved varieties suitable to spin above 20s counts as far as practicable. The agriculturists must be provided with such cotton seeds and manure as may improve the variety of cotton and increase the yield per acre to the maximum extent. For this purpose the Agriculture Ministries of the Centre and the States will have to co-ordinate their efforts and find out ways and means whereby the outturn per acre may be increased so as to meet the requirements of the country. I feel that even with the present area under

By
Sir PADAMPAT
SINGHANIA

cotton cultivation the country can produce the required amount of cotton provided the yield per acre is raised. This matter, therefore, needs first priority in the working programme of the Agriculture Ministries of the Centre and the States. The Government have to launch a vigorous campaign in this connection and intensify the research work for increasing the yield without going into the botheration of increasing the present acreage. I am of opinion that if honest and sincere efforts are made to achieve this object, the country can produce at least as much cotton as is necessary for the time being to meet her present requirements of about $13\frac{1}{2}$ to $14\frac{1}{2}$ yards per head. If necessary attention is not paid to improve the variety of cotton and if the present yield is allowed to continue to be low as it is now, I firmly feel that cloth production will dwindle down further and bring in more misery to the consumers.

The Problem of Labour

The labour problem too cannot be ignored. It is true that the wages of the textile workers in general have considerably increased out of all proportions to the increase in the productivity of labour. But I would hardly share the view that a technician should get less than what he is getting today, provided of course he produces more and more. There are two alternatives to produce more cloth at cheaper price. One is 'rationalisation' and the other is 'reduction in the wage level'. Looking to the present conditions I would prefer the former alternative to the latter. I am fully convinced that rationalisation would go a long way to solve our problem. Rationalisation if worked on sound lines would reduce the cost of production and thereby the price of cotton cloth. A reduction in the price level would inevitably raise the demand of cloth, and to meet this demand more mills would come into existence which would create a vast field for employment. In order that the Indian Cotton Textile Industry may retain good technicians, the alternative of 'rationalisation' must be given the first priority and that

of 'reduction in wages' may be given the second place. Looking to the present economy of the country I feel that we must adopt ways and means to secure increasing demand of cloth for the home market as well as from abroad. It is only then that the Cotton Textile Industry of the country can flourish.

Export Markets

As already stated, production of more cotton in the country is the prime need of the hour. If the country is unable to produce its own cotton to meet her requirements, she will have to go in for foreign imports and will have to export some cloth manufactured from the imported cotton. The cloth manufactured out of the imported cotton can be exported to foreign countries only if it competes favourably with the cloth manufactured in other countries of the world like USA, U.K. and Japan. The country will have to see that the Cotton Textile Industry does not only meet her internal demand but is also in a position to make appreciable exports of cloth to foreign countries so that she may earn some exchange in terms of Sterling and Dollars which are so essential to build up her economy in the international market.

Mill Stores

In addition to the above, the Indian Cotton Textile Industry has other difficulties too. The industry has to depend on foreign countries for most of its requirements of stores. Although some of the articles of stores are being manufactured in the country itself yet many of the important items such as bobbins, spare parts, beltings, electrical fittings, etc. are more or less the monopoly of foreign markets. It is, therefore, necessary that arrangements are made for manufacturing as many articles of stores in the country itself as could be possible, otherwise the industry will starve for want of such articles of stores and will remain in the hands of foreign markets.

MILL CLOTH

If hand-spun and hand-woven khadi, whether cotton, wool or silk, is to be the order of the day, what is the place of mill cloth in the national economy is the question often asked. If millions of villagers could receive and understand and take up the message of the spinning wheel, I today know that there is no room for mill cloth, whether foreign or Indian, in our domestic economy and that the nation will be all the better for its entire disappearance.

This statement has nothing to do with machinery or with the propaganda for boycott of foreign cloth. It is purely and simply a question of the economic conditions of the Indian masses.

But unless Providence comes to the rescue and miraculously drives the masses to the spinning wheel as to a haven of refuge, the Indian mills must continue to supplement the khadi manufacture for a few years to come at any rate. It is devoutly to be wished that a successful appeal could be made to the great millowners to regard the mill industry as a national trust and that they should realise its proper place. The millowners cannot wish to make money at the expense of the masses. They should on the contrary model their business in keeping with the national requirements and wipe out the reproach that was justly levelled against them during the Bengal Partition agitation. Even now complaints continue to come from Calcutta and elsewhere that Indian mills are charging for their clothes more than Manchester although their clothes are inferior to the Manchester ones. If the information is correct, it is highly unpatriotic and such a policy of grab is likely to damage both the cause and the country. At the moment when the country is going through the travail of a new birth, surely it is wicked to charge exorbitant prices and thus not merely to stand aloof from the popular movement but actually to be caldus in indifferent to it.

MAHATMA GANDHI
in
Young India

The Role of the Cotton Textile Industry In India's Foreign Trade

By G. C. DESAI, I.C.S.,
Secretary, Ministry of Commerce Government of India

THE Indian textile industry today is called upon to play a role in the country's international trade which is far beyond what was ever dreamt of even by the far sighted pioneers who laid the foundations of this great industry. For until only a couple of years ago the ambition of the industry was to make India self sufficient in cloth and independent of imported supplies. Throughout her past history, India has been a net importer of cotton textiles on a very substantial scale. About 1858 our imports from Great Britain of both cloth and yarn constituted one third to one half of our total imports from abroad and by 1913-14 they had reached a peak figure of 3,000 million yards which was $2\frac{1}{2}$ times the indigenous production. During the first World War and the inter war period there was a steady development of the industry, the number of mills increasing from 272 in 1913-14 to 389 in 1938-39. Nevertheless, the output of Indian mills was not enough to satisfy internal requirements, the contribution of the Indian production to domestic consumption being roughly estimated at 65%. It was small wonder therefore that the textile industry concentrated more on eliminating competition from foreign cloth within the country than on capturing overseas markets.

To say this is not to suggest that India was not exporting any piecegoods before the second World War. Actually something like 200 million yards of Indian piecegoods had already begun to find a market in neighbouring countries before the outbreak of the second World War. The war gave a further stimulus to the industry and the export trade. Under the impetus of war orders from allied governments and changes in the world trade in piecegoods, production of cloth and yarn in India steadily increased year by year from 1938-39 and reached a record figure in 1943-44. Total production of yarn increased by about 29 per cent from 1303.2 million lbs in 1938-39 to 1680.5 million lbs in 1943-44 and that of cloth by 14 per cent from 4269.3 to 4870.7 million yards during the same period. Though there was a slight decline thereafter, the production was always maintained at a level substantially higher than the pre war level.

This increase in production combined with control and rationing of cloth in the country, contributed to an expansion of our exports which increased almost phenomenally from 177 million yards in 1938-39 to 771 million yards in 1941-42 and 819 million yards in 1942-43 which was the peak year for production as well as exports. This expansion had been helped by the concentration of U.K. on the development of war industries which not only reduced India's imports but also enabled her to increase her exports to markets in the Middle East countries and East and South Africa where British competition was keenly felt. Similarly the outbreak of War with Japan completely eliminated India's important rival in Ceylon and the South East Asian countries, and India was thus almost the sole supplier of cotton textiles from Middle East to Far East. In 1938-39 Burma was our chief consumer, exports to that country amounting to Rs 2.4 crores in value. Ceylon, the Straits Settlements, Nigeria, Iraq, and Mauritius and Dependencies came next, but their total off take was less than 2 crores. In the peak year 1942-43, Australia was the largest consumer with a total off take of nearly Rs 7 crores, Iraq took the second place with over 4 crores while Ceylon, Aden and Dependencies, Iran, Kenya Colony, each took Indian textiles worth between 2 to 3 crores of rupees. Six other countries imported cloth to the tune of over a crore of rupees each.

After the peak figure attained during the war, there was a gradual decline in exports owing partly to increased internal consumption due to relaxation of control and partly to greater competition from other producing countries. Our exports in 1946-47 amounted to nearly 25 crores and were 35% below the peak exports in 1942-43. There was a further decline of Rs 7 crores in the following year when the total exports were about half the record figure. In the year 1948-49 the downward trend continued, although owing to emergence of Pakistan as a foreign market the statistics of total exports including Pakistan were somewhat higher. This however did not by any means indicate a recovery since the consumption of Pakistan was previously a part of internal consumption and so far as other countries

were concerned, the actual export during 1948 was only about half the total quota of 300 million yards set aside for the purpose

A mere decline in the volume of exports would not have been a source of worry if India's balance of trade position had been comfortable and if the fall in exports had meant an increase in internal consumption which the country could afford. In actual fact, the full effects of the partition on the textile industry as well as the country's overall economy began to be realised only towards the beginning of 1949. The outstanding effects were that in general India's over all balance of trade position had worsened and one of the main reasons for this was that instead of being a net and substantial exporter of raw cotton, India had become an important importer. It became clear that the volume of imports of cotton required to keep the textile industry in full production could only be financed in terms of foreign exchange if there were substantial exports of cotton textiles taking place at the same time. It also became evident that with the partition of the country the textile industry had lost from its internal market a substantial consuming area, thus resulting in a surplus capacity, which must in its own interest find an export market either in Pakistan or else where. The maintenance of production and employment in the industry not only needed the import of raw cotton but also an export market for its product.

With this realisation, which coincided with the emergence of an overall adverse balance of trade, came a concerted effort in which the Government, the industry, and the trade all played their respective parts for the development of India's export trade in cotton piecegoods. The export duty on cotton piecegoods was removed. Quota restrictions on the volume of exports were abolished. Price control over exports to all destinations was reimposed. Meanwhile the Export Promotion Committee after examining competent witnesses recommended that India can afford to, and indeed must, export 800 million yards of cotton piecegoods annually. The target was accepted by Government and it is satisfactory to note that the monthly volume of exports by the end of 1949 had doubled in comparison with the export in the middle of 1949 and reached a figure which gives

room to hope that the figure of 800 million yards annually would be achieved. The only feature in this export boom in cotton piecegoods which may be said to be unhealthy is the fact that all the export is not of finished goods directly intended for consumption in importing countries, but it includes a certain portion of unfinished cloth which goes to Manchester for being processed further and re-exported to other countries. The industry should really take credit for export of finished goods and should modernise its machinery so that the export is limited to finished goods and does not extend to grey cloth. There is reason to believe that the industry appreciates this point and is taking steps to meet it.

That however is not the end of the story. We enter the year 1950 with grave anxieties regarding the adequacy of the supply of raw cotton without which our production cannot be sustained. Government are determined that the shortage during the year shall be made up by imports for which we are able to release foreign exchange on account and only on account of the excellent showing of our export trade in piecegoods which has received a further fillip from devaluation. Nevertheless Government cannot with equanimity face the prospect of maintaining the present level of cotton imports year after year. Measures to step up the cultivation of cotton have therefore assumed an importance and an urgency which had not earlier been foreseen.

The objective of every well wisher of the textile industry can in the circumstances as they are today be but one. The industry must make the maximum possible contribution to the country's foreign exchange resources, while at the same time the standard of living of the people of India should continue to rise enabling them to afford a larger yardage of cloth *per capita* than in the past. If this twin objective is to be achieved, the industry must work to the utmost limit of its capacity providing employment on as large a scale as possible, giving wages which will be high because of better productivity, relying increasingly, and if possible exclusively, on cotton grown in India, providing enough cloth for internal needs and yet keep the export markets now embracing countries far and near from Canada to Hong Kong and from Sweden to New Zealand.

SWADESHI

Mahatma Gandhi defined Swadeshi as that spirit in us which restricts us to the use and service of our immediate surroundings to the exclusion of the more remote. It is necessary to attend to the primary physical needs of man and satisfy them by the use only of things that are produced by himself or his immediate neighbours. The primary needs are food, clothing and shelter. We have not lost altogether the art of providing and producing our own food although we are steadily losing that also. We used not only to be self-sufficient in the matter of clothing but were able also to produce a large quantity for sale and export to other countries. A house cannot be imported from elsewhere and man has to build himself one but the materials of which it is made may not be Swadeshi in the above sense. The greatest inroad on true Swadeshi has been made in the matter of our clothing and it was therefore natural that this aspect should have come first of all under Gandhi's observation and spurred him on to a study of the causes of the ruin of what was at one time not only the means of supply of a primary need but also a means of attracting wealth from elsewhere besides being a fine art which excited the admiration of people of all countries with which we had commerce from the earliest times of which any historical record is available.

DR RAJENDRA PRASAD
in an introduction to
"Economics of Khadi"
Nayivan Press Ahmedabad

INDIA'S TARIFF POLICY

By D. L. MAZUMDAR, I C S,
Member Secretary, Indian Fiscal Commission

TILL the beginning of World War II the Indian Tariff policy was moulded by three different sets of influences, viz

- (i) the early liberal tradition which it had inherited from the British trade policy of the second half of the 19th century, a tradition which persisted in this country with almost undiminished vigour till the end of the First World War
- (ii) the policy of discriminating protection formulated by the Indian Fiscal Commission of 1921-22 and accepted by Government of India in 1923,
- (iii) the commitments arising out of the system of Imperial Preference in the first quarter of the century, and subsequently out of the Ottawa Agreement of 1932 and other international agreements which affected India by reason of her membership of the British Commonwealth

Consistent with its early free trade bias, the Indian tariff structure was essentially a source of revenue till 1923 when the policy of discriminating protection was adopted by the Government of India. Since then it has acquired, in parts, some slightly protective bias. The present tariff structure is briefly as follows

Import side

- (a) Revenue Duties—Standard and Preferential rates of duty
- (b) Protective Duties—Standard and Preferential rates of duty
- (c) Special rates for Burma

Export side

Export duties are generally levied only for revenue purposes. Till the recent devaluation of the rupee, in September 1949, there were export duties on six items viz rice, jute—raw and manufactured, raw cotton, tea, manganese ore, cigarettes, cigars and cheroots. The rates were either *ad valorem* or specific, but there were a few cases of combination of these forms of tariff and of tariff valuations.

Immediately after devaluation an Export Duties (Emergency Provisions) Ordinance 1949, was promulgated which empowered Government to levy export duties on coal, iron and steel, oilseeds, vegetable oils, vegetable products, shellac and unmanufactured tobacco. Under this Ordinance Government has levied export duties on iron and steel, mustard oil and on black pepper. The existing export duty on hessians has also been raised from Rs 80 to Rs 350 per ton. These new duties and the enhancement of the duty on hessians fall outside the traditional

course of tariff changes, and represent an item in India's economic defence strategy designed to safeguard her economy against the sudden dislocation caused by the devaluation of the rupee and the contrary currency policy pursued by Pakistan. As the Hon'ble the Commerce Minister of the Government of India observed in course of the debate on devaluation in the Indian Parliament: 'An Ordinance has been issued authorising the Government to impose export duties on various commodities. The object is to prevent a speculative rise in prices and also to ensure that if an increase in rupee prices of export commodities is inevitable the element of the increase comes to the exchequer and does not inflate profits, wages, etc. A further object is that when both the demand and supply of the commodity is inelastic we should not suffer a loss in foreign exchange on account of the cheapening of our product.'

Early History

As has been already said till 1923 the Indian Tariff system was essentially a revenue yielder and its structure was also comparatively simple. Almost all articles of import liable to duty were subjected to one of the three rates—2½ per cent, low rate, 10 per cent general rate and 30 per cent, luxury rate.

In the early days of British rule, export duties were also considered almost exclusively as a source of revenue and most of the articles on the export list were subjected to low rates of duty. Their injurious effects on trade were, however, soon realised and in 1880, export duties on all articles except rice were removed. During the First World War, revenue considerations again necessitated the imposition of export duties on some selected articles—the two first selected being

- (i) jute, both raw and manufactured,
- (ii) tea

The only departure from this general policy as regards export duties was made in 1918 when an *ad valorem* duty of 15% was levied on the exports of hides and skins for the protection of the indigenous tanning industry. This duty was, however, reduced to 5% in 1923, thus losing its protective character and was finally abolished in 1934-35.

The Beginnings of a Protective Tariff

The second stage in the evolution of India's tariff policy was registered by the promulgation of the fiscal autonomy convention in 1919. In deference to the strong public opinion expressed on this subject the U.K. Government decided to grant fiscal autonomy to India and directed the Secretary of State for India to avoid, as far as possible, interference in

* The views expressed in this article are those of the author and not of the Fiscal Commission or any other Department of the Government of India.

all cases relating to the fiscal policy of India in which the Government of India and its Legislature were in agreement. His intervention, when it did take place, was to be limited to safeguarding the international obligations of the Empire or any fiscal arrangements within the Empire to which His Majesty's Government was a party. This was a fundamental departure from the predominantly 'colonial' attitude of earlier years, when fiscal policy was regarded as the primary concern of the U.K. Government, but greater changes were still to follow.

In 1921, again in deference to a long standing and insistent demand of the public in India for a revision of tariff policy, the Government of India appointed a Fiscal Commission to 'examine with reference to all the interests concerned the tariff policy of the Government of India including the question of desirability of adopting the principle of Imperial Preference and to make recommendations'. After an enquiry lasting over a year, the Commission recommended that the Government of India should adopt a policy of discriminating protection to indigenous industries and tariffs should be used as an instrument for attaining this end if the industry could establish that

- (i) it possessed natural advantages,
- (ii) that without the help of protection it was not likely to develop at all or not so rapidly as was desirable, and
- (iii) that it would eventually be able to face world competition without protection.

The Commission laid great emphasis on these conditions and recommended that careful discrimination should be exercised in the selection of industries for protection and in the degree of protection afforded so as to render the inevitable burden on the community as light as was consistent with the due development of industries. The Commission recommended that the grant of protection to an industry should be preceded by an enquiry by the Tariff Board whose functions should be *inter alia* to investigate into the merits of particular industries, to watch the operation of tariff and generally to advise Government and the Legislature in carrying out the policy indicated above. Another important recommendation of the Commission was that no tariff duties should be ordinarily imposed except for purely protective purposes and even then only at very low rates. On the difficult issue of Imperial Preference, the Commission recommended that no general system of Imperial Preference should be introduced but preferential duties on a limited number of commodities might be imposed with the approval of the Legislature if the preference given in no way diminished the protection required by Indian industry and preference did not involve on balance any appreciable economic loss to India.

The Government of India accepted the main recommendations of the Commission in a Resolution passed on the 22nd February 1923. Since then the Tariff policy of the Government of India has been framed more or less on the lines recommended by the Fiscal Commission. Though a permanent Tariff Board was not constituted, the claims of indigenous industries for protection were examined by Tariff Boards constituted for them from time to time and protection was granted to industries on the recommendations of Tariff Boards with minor modifications if necessary. In a few cases Government did not agree with the recom-

mendations of the Boards and protection was denied to the industries concerned. Under this scheme the important industries which received protection were iron and steel, cotton textiles, sugar, paper, matches and sericulture. Tariff anomalies were also corrected in a few cases on the recommendation of the Tariff Boards. Government accepted the recommendation of the Fiscal Commission that export duties should not be used for protective purposes as in the case of hides and skins.

The recommendation of the Indian Fiscal Commission of 1921-22 and the administrative action which followed in their wake between 1923 and 1939 laid the foundations of a discriminating protective system for the country and constituted a fundamental deviation from its basic free trade policy and practice of the preceding half century. The new trend was reinforced by the reorientation in British trade and tariff policy after the currency crisis of 1931 and was further aggravated by the extension of the Imperial Preference system which followed the Imperial Economic Conference at Ottawa in 1932. These influences are briefly discussed in the following section.

Imperial Preference

India was not a party to any general scheme of Imperial Preference till 1932. On two occasions between 1923 and 1931, lower duties on United Kingdom goods than those levied on similar goods of foreign origin were imposed. The articles which received preferences were steel and cotton textiles. In both cases the differentiation of duties was held to be justified in the interests of India.

The early thirties which brought in the Great Depression saw a radical change in Britain's fiscal policy. By the abnormal Importations (Customs Duties) Act, 1931, and the Horticultural Products (Emergency Customs Duties) Act, 1932, most of the articles imported into the United Kingdom were subjected to increased rates of duties with the result that the United Kingdom was in a position to reciprocate the concessions received in Empire countries. As the United Kingdom was India's largest single customer it was no longer the question of what India stood to gain by joining the general scheme of Imperial Preferences but what she stood to lose by standing apart from it. The exclusion of India from a common preferential arrangement including the United Kingdom Dominions and the Colonies would have been a serious matter for, the more so at a time of declining trade, increasing restrictions and shrinking markets. India, therefore, decided to enter into an Agreement with the United Kingdom and the United Kingdom India Agreement was signed in August 1932 at Ottawa. The Agreement provided for the grant of a preference of 10% on a large number of commodities imported into India from the United Kingdom in exchange for similar concessions received by her for her exports to the United Kingdom. The Agreement was ratified by the Indian Legislative Assembly in November 1932, provisionally for a period of three years. When the renewal of the Agreement came up before the Assembly in 1936, it voted for its termination. Government, however, decided to continue the Agreement as a purely interim measure till a new agreement was arrived at between the two countries. After protracted negotiations a new Indo-British Trade Agreement was signed on the 20th March 1939. By this agreement the number of articles on which India gave preference to the United Kingdom

was brought down to about twenty while the United Kingdom agreed to extend concessions on almost all articles which enjoyed concession as a result of the Ottawa Agreement. This agreement is still in force.

War and Tariffs

The outbreak of World War II introduced some entirely new factors into India's trade and industry. These factors are still operative and will in all probability profoundly influence not only the relative position of tariffs *vis-à-vis* other types of positive regulation and control in the development of India's trade and industry but also people's ideas about the future structure and working of India's trade and industry. During the War, controls over imports and exports were introduced on almost all articles and the preferential and protective tariffs lost much of their importance. The increasing shortage of goods and the requirements of global war strategy led to the establishment of many new industries in India, albeit on a small scale and called for direct State assistance in increasing measure. In order to encourage these industries as early as 1940 Government assured the industrialists that industries started during the war would be given adequate protection from foreign competition, as and when necessary provided they were organised on sound lines. No such protection was of course needed during the war but Government recognised that the provision of assistance to or protection of such industries was likely to assume a measure of urgency during the period of transition from war to peace and one of their major problems during the post war years was to give form and content to their war time assurance.

Post war Tariff Policy

In their first statement of Industrial Policy issued in April 1945 the Government of India laid down the following objectives—

- (i) to increase the national wealth by the maximum exploitation of country's resources,
- (ii) to make the country better prepared for defence and
- (iii) to provide a high and stable level of employment.

As one of the measures to achieve this end Government decided to take positive steps to encourage and promote the rapid industrialisation of the country to the fullest extent possible. Pending the formulation of a tariff policy appropriate to this need, Government appointed a Tariff Board for a period of two years to investigate and recommend interim relief to war time industries. The conditions offered were briefly as follows—

- (i) that the industry was established and conducted on sound business lines and
- (ii) (a) that having regard to the economic and natural advantages enjoyed by the industry and its actual or probable cost it was likely, within a reasonable time, to develop sufficiently to be able to carry on successfully with protection or State assistance

or

- (b) that it was an industry to which it was desirable in the national interest to grant protection or assistance and the probable cost of such protection or assistance to the community was not excessive.

The Board was not to recommend protection for a period exceeding three years.

The total number of cases referred to the Tariff Board was 49. Within a period of 18 months it reported on 42 cases including four cases of industries which were protected before the war and whose claims for continuance of protection the Board was asked to examine. On the basis of the Board's recommendations about 30 industries were granted protection. In November 1947, the Board was reconstituted for another period of three years with the following functions

- (i) to report to Government, as and when required on the factors that lead to increase in the cost of production of Indian manufactured goods as against imported articles, and
- (ii) to advise Government as and when required on measures whereby internal production might be secured on the most economical basis.

According to a Resolution issued on the 6th August 1948 the Board was also authorised to conduct enquiries as and when necessary on the effect of protective duties or other means of assistance granted and advise Government on the necessity or otherwise of modifying the protection or assistance already granted.

General Agreement on Tariffs and Trade and Havana Charter

The protectionist trend in India's tariff policy, which was halted by the war time controls and regulations and the relatively minor role conceived for tariffs in the context of these new forms of war time and post war regulatory measures encountered some further opposition from the deliberations of a series of conferences on Trade and Employment held under the auspices of the United Nations in London, Geneva and Havana.

In 1946, India was invited to the Preparatory Committee of the United Nations Conference on Trade and Employment held in London to discuss the American proposals for Expansion of World Trade and Employment. India took an active part in this and the subsequent session of the Conference. India was also a party to the negotiations that were carried on at Geneva for the reduction of the general level of tariffs. As a result of these negotiations India agreed to reduce her tariffs on more than sixty items and the margin of preference in a few cases, in exchange she received similar concessions from the other participating countries. At Havana India was a signatory to the final version of the Charter although like the other leading countries of the World she has not yet been in a position to ratify it.

Fiscal Commission, 1949, and the Future Outlook

It will be noticed from the foregoing paragraphs that since the Indian Fiscal Commission reported in 1922, there has been no comprehensive formulation of India's tariff policy. The developments that have taken place since then have proceeded primarily on an *ad hoc* basis in the light of the contextual changes that the policy encountered from time to time. The War and its aftermath which resulted in large scale changes in the pattern and composition of India's foreign trade and induced equally far reaching

changes in the climate of opinion on trade and tariff matters, called for a re formulation of India's tariff policy in the context of her domestic developments of which the partition of the country was easily the most important and the changes in the world economic situation of which the prevailing dollar shortage was the most representative symptom. As early as 1945, the need for such a reorganisation of India's tariff policy was envisaged in Government's first statement of Industrial Policy. The second Statement of Industrial Policy issued in April 1948 reiterated this need, but it was not till the end of April 1949 that a Fiscal Commission was appointed to undertake this task. One of the major duties of this Commission would be to consider

- (a) the future policy which Government should adopt in regard to protection and assistance of industries and the treatment and obligations of the industries which may be protected or assisted,
- (b) the machinery required to implement such policy, and
- (c) any other matter having a direct bearing on the effective implementation of this policy

Government have further directed that, in considering these issues, the Commission would be free to distinguish between short and long term aspects of the problem and also advise in the light of the country's requirements how far it would be desirable to undertake international obligations of the kind involved in the General Agreement on Tariffs and Trade or the Charter of the International Trade Organisation

The new Fiscal Commission has been at work since June 1949 under the Chairmanship of Sir V. T. Krishnamachari, formerly Dewan of Baroda and Jaipur, who had a great deal to do with the economic development of the Baroda State in the thirties. Unfortunately for the Commission, the general background of the country's external economic relations against which it started its work has been rapidly changing ever since. The progressive deterioration in India's balance of international payments, which had become a source of anxiety to the Government of India as early as February 1949, and had subsequently led to the imposition of severe restrictions on imports shortly after the appointment of the Fiscal Commission had been announced had not yet been appreciably arrested. On the contrary, the gap in the country's trading account *vis-à-vis* the dollar areas widened, and the position was further worsened by the rapid depletion of the Commonwealth dollar reserves, in the maintenance of which India no less than the other countries of the sterling area had a vital interest. In pursuance of the recommendations of the Commonwealth Finance Ministers' Conference held in July 1949, imports from hard currency areas were drastically cut down and the monetary ceilings laid down for imports from sterling and soft currency areas were further reduced. Before these new restrictive measures could work out their full effects on the country's balance of payments, the devaluation of the rupee followed in September 1949 in the wake of the devaluation of the pound sterling, and India's external trading conditions were further complicated by the refusal of Pakistan to devalue her currency. The setback to the balance of payment position has since been substantially

corrected, but whether the improvement will be maintained in the coming months remains to be seen. In any case, the long term position as regards our international balance still remains a source of anxiety

Devaluation is, however, likely to leave more permanent impress on the country's economy, primarily through its effect on India's trade relations with non sterling area countries and the consequences of this changed trade relations on its internal economy, for it is useful to remember that as many of the soft currency countries have devalued almost to the same extent as India, the values by itself have not provided with any additional incentive to increase her exports to sterling and soft currency areas. Even in respect of hard currency areas it is too early to attempt to assess the effects of devaluation on the pattern of India's foreign trade. There are, however, two broad generalisations which can be made. Negatively, the advantages of devaluation should not be frittered away in a rising spiral of prices but should be followed up by internal disinflationary measures. Positively, devaluation may need to be followed up by deliberate and purposive control of the direction and composition of her foreign trade, not merely through negative measures of import and export control but perhaps also by more positive action like long term purchase agreements for primary commodities or bilateral commercial agreements providing for the purchase of specified quantities of each other's goods. In order to implement effectively such positive measures of regulation and control of foreign trade it may be further necessary to visualize—at any rate for the duration of the country's balance of payment difficulties—substantial changes in the current agency and methods of international trading. The nature and tempo of these developments will, again, depend not merely on India's policy in these respects, but also on the policy and the practices of the principal countries with which she has trading relations. It is impossible at this stage to predict how these changes will eventually work out but the Fiscal Commission will no doubt have to take due note of these developments and their certain repercussions on the role and relative importance of tariffs as an instrument for the regulation and promotion of India's trade and industry. Devaluation not only alters the relative competitive position of domestic industries according as they cater for the export or the domestic market, but also through its effect on import prices, alters the terms on which domestic and comparable foreign industries compete with one another. The supplementary measures which devaluation generally calls for may further alter the degree and pace of these competitive forces, and to that extent influence the course of domestic industrial development. While it is difficult to forecast what the findings of the Commission will be on these and related issues, it would seem to be clear that any long term formulation of India's tariff policy must attempt to secure as close a dynamic balance as possible between the progress of her industrialisation and the course of her foreign trade, consistent with the two fundamental objectives of India's industrial policy, viz

- (a) the optimum exploitation of her natural resources, and
- (b) the attainment of a high and stable level of employment

END of a hundred years provides a convenient *pedestal* for looking back and taking stock of the development of an industry and the organisers of this publication have therefore done well in choosing the present time for taking stock of the development of the textile industry. In this particular article it is intended to assess the part played by Transport in assisting the textile industry to attain its present position during the last 100 years

Role of Transport in Industry

Generally speaking, no industrial progress is possible without the assistance of transport. Any large scale industry, in order to achieve satisfactory progress, must depend on the availability of raw materials, supply of labour, facilities for distributing its finished products and securing *mechanical equipment and mills stores*. It is thus obvious that such industry is dependent at every stage on transport for the availability of all these factors referred to above which ensure its progress. Even in European countries development of the various industries that have established themselves there has been coincident with the development of transport.

over 500 miles of railways were constructed. The growth of railways and roads made it possible for raw cotton to be carried over long distances and at comparatively cheap rates and thus helped the development of the textile industry. It also accounts for the concentration of the textile industry in Bombay Island and round about, although there were other encouraging factors such as the humid climate of Bombay and the facilities of Bombay Harbour.

World War I and After

In the early days of the textile industry, it was more spinning than weaving that was undertaken as manufacture of yarn was found to be more profitable. The yarn manufactured by the textile mills in Bombay was exported as far as China and Japan. But these markets were lost to India as Japan itself was making considerable industrial progress and looked to India more for the supply of cotton than of yarn. In India itself the improved communications made it possible for the textile industry, on the one hand to secure its raw materials more easily than before and on the other to cater increasingly for the home market namely India itself by making use of the rail connections to distribute the finished products. While the development of the industry

ROLE OF TRANSPORT IN THE DEVELOPMENT OF THE TEXTILE INDUSTRY

Early Days of the Industry

The first textile mill though constructed about 1851 very near Bombay did not start working till 1854 and while a few mills sprang up round Bombay within the few following years the industry did not make any startling progress for several years. One of the reasons for the slow progress was that the industry was dependent on foreign sources for its raw cotton and due to the American Civil War, the price of cotton had reached heights beyond the reach of the handloom industry and the newly started mill industry. At that time communications in India itself were in a poor state. There were hardly any roads to speak of and the railway construction had only just started thanks to the interest taken by Lord Dalhousie in developing communications in India. He fully appreciated the importance of communications in bringing home to the country the benefits of a single rule and fighting the famines from which the country suffered, at intervals on account of the failure of the monsoon. An experimental line was constructed near Calcutta in 1849 and the first railway line in India joining Bombay to Thana was opened up for traffic in 1854. Fairly good progress in Railway construction was achieved until 1857 when there was a set-back. The next 10 years however, registered a fairly rapid development and by 1870

by

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was arrested to some extent during World War I on account of the difficulty of obtaining requisite new machinery from abroad the industry experienced a period of great prosperity in the years immediately following it. During this period

the industry was given special freight rates and other concessions for the transport of its raw material and its finished products. Thus a large number of special rates for booking cotton to the milling centres such as Bombay Ahmedabad Kanpur, Howrah Madras Coimbatore etc were introduced. In January 1935 rates for raw cotton from Coimbatore and Tiruppur to Bombay Ahmedabad and other neighbouring milling centres were considerably reduced. In 1937, a rebate of 20% on freight charges was allowed on consignments of raw cotton full pressed booked from certain stations on the old N.W. Railway to Kanpur. A certain amount of relaxation of packing conditions was also made in favour of indigenous mill packed bales of piecegoods as compared with imported piecegoods. Certain railways allowed benefit of lower rates applicable to cotton full pressed to cotton pressed to not less than 24 lbs to a cubic foot instead of 30 lbs.

World War II

During World War II, there was an excessive demand on Indian Railways for the movement of various categories of goods. With a view to ensure successful prosecution of war it became necessary to regulate movements according to priorities. Thus at the end of 1943, a priority list, containing nine priority classes, was introduced. The maintenance of industrial production was allotted Class V priority under this list and it was in this class that the movement of raw materials to, and finished products from, textile mills was included along with other important industries like steel and cement.

System of Priorities

The priorities had to be altered with the cessation of hostilities and from 15th April 1947 sponsored movements of cotton piecegoods were given Class I(d) priority while movement of raw materials to textile mills was placed in Class 2(a) priority. This priority schedule was enacted as a result of the Railways (Transport of Goods) Act of 1947 passed by the Central Legislature in March 1947, under which priority was accorded to 99 essential items only. Having regard to the gradual improvement noticed in rail transport by the end of 1947 and the beginning of 1948, the Act was amended on 25th March 1948, and a priority list consisting of three classes only was brought into force for a year with effect from the 25th March 1948. The number of items included in this Priority Schedule was reduced from 99 to 18 so as to cover only really essential items and movement of piecegoods and raw materials to textile mills was accorded Class II Priority. In spite of general improvement in transport conditions during the year 1948, difficulties have not completely disappeared, more particularly, on certain individual railways and the Railway (Transport of Goods) Act, 1947, as amended was extended till March 1950. While the priority list consisting of three classes is still current transport conditions have improved so much on certain railways, for example E.I. and E.P. Railways that it was found possible to dispense with this priority classification and movement of goods traffic on these Railways has consequently become free. In other words goods are accepted for despatch as soon as they are offered.

Movement of Cotton Textiles

Reference may be made here to the Cotton Textiles (Control of Movement) Order, 1946. This order was promulgated as a measure of rationalisation in the cotton textile industry in order to secure maximum production and distribution of textiles at approved prices. It had considerable repercussion on the movement of textiles. The whole country was divided into 28 workable zones and movement from one end to another was prohibited without specific permission from the Textile Commissioner. This was done to ensure complete stoppage of uneconomic and unreasonable movements. Steps were, however, taken by the Textile Commissioner to see that all the requirements of each zone were duly provided for. Permission was given to railway passengers to carry, only upto certain limits, cloth and yarn from one place to another as part of personal luggage. There were no restrictions inside the zone, however, on the movement of cloth and yarn by road, air and sea or inland navigation or by goods train or as a railway parcel. No

such restrictions, were imposed on the movement, inside or outside a zone, of handloom cloth and yarn, imported cloth and ready made garments, which could therefore be moved freely without any permits. This overall control by the Textile Commissioner greatly assisted in the rationalised distribution of cloth to consuming centres in the country and ensured adequate provision to the industry of all its requirements of mill stores, etc. Cloth was given the same preferential treatment as foodgrains in so far as its movement was freed from operating restrictions wherever possible. Also when transport conditions proved specially difficult the railway authorities allotted *ad hoc* wagon quotas or even arranged for special trains for the movement of textiles to specified areas and destinations, in order to meet the demands of high priority traffic in textiles.

Present Working

The political changes brought about in the country in August 1947 led to a further pressing demand on transport and therefore of tightening up of movement control and stricter rationing, of available transport among competing high priority demands. In November 1948 the Central Government concluded that instead of rationing, insufficient transport supply among all the competing industries certain key industries should be selected as of special importance and preferential treatment given to them to provide cent per cent transport for their needs. The result would be that other industries would get proportionately less transport than if it was rationed out among all industries. It was decided that textile, cement and steel industries should be considered as three such basic national industries, requiring cent per cent fulfilment of the transport needs. The targets of transport requirements for each of these industries are laid down and phased movement programmes for each quarter are screened and approved in advance, by the Standing Committee of the Central Board of Transport in consultation with the representatives of the industries concerned and the railways. The targets are fixed on a workable and realistic basis after giving due weight to all the relevant factors such as the transport position at the moment, the rate of production and quantities of output to be distributed to the consuming areas. The actual implementation of this programme is carefully watched by the Committee which meets every fortnight. This scheme was brought into operation early last year and the results so far achieved show that the railways have implemented the undertaking in full. In fact on several occasions the transport provision has been in excess of requirements and the industry concerned has, at times, been unable to avail itself of the full facilities provided.

The following statistics showing the actual movement of textiles in each quarter of 1949 will be found interesting.

Movement of Textiles in 1949
(in bales)

1949 Quarter	Production	Approved programme	Actual movement	Percentage moved against programme
I	661.3	381.621	408.65	106.8%
II	670.222	431.637	499.98	115.8%
III	678.82	511.30	491.31	101.8%
IV	623.1	473.0	358.1	Estimated

Road Transport

After describing the part played by the railways in helping the development of the textile industry, it will be opportune to refer to the part played by road transport in respect of the textile industry. Before World War I it was only in large cities that a few mechanically propelled vehicles were used in public transport. Ponderous solid-tired steam-driven lorries took cotton from the railway goods depots to the mills in Bombay and later took finished cotton goods to the Railway station or to the Docks for export. This was prior to the advent of motor transport. It was after World War I that motor transport made great strides and increased use began to be made of motor vehicles for the purpose of public transport. Some idea of the increase in their numbers over recent years could be had from the following figures

Year	Number of goods vehicles	Motors per 1,000 population
Undivided India		
1939	12,17	8.3 (Unadjusted)
1940	14	
1941	1,68	
1942	1,544	
1943	853	
1944	9,6	
1945	26,2	
1946	39,61	11.4 (Ratioed)
Indian Union		
1947	40,107	
1948	51,82	
1949	52,267	
Sept. 1950	70,800	13.3 (Ratioed)

Nationalisation of Road Transport

The expanding network of highways and feeder roads made it possible for cotton to be moved from the fields to the ginning centres and from there to the mills spread all over the country. The movement of textile goods from mills to trading centres and even to the distant consuming markets in towns and villages was facilitated by improvement of road transport. A reference may be made here to certain significant developments in connection with roads and road transport which augur well for its future. Most Provincial Governments are now following a policy of nationalisation of road transport. Thus, Bombay Government has recently established a Board for promoting an efficient, adequate and properly co-ordinated system of road transport in the Province for the movement of passengers and goods. The State Road Transport Corporation as it is called, is expected to serve in addition to Bombay City, another 27 districts. It has been given certain wide powers to prepare and execute such schemes as are likely to rationalise and co-ordinate any road transport service or ancillary service in any part of the Province.

Development of Roads

As regards roads themselves there has been a complete reorientation of Government outlook. In the earlier years of the 20th century roads had come to be looked upon as a subject of local interest only, fit to be handled by municipal

ities, district and local boards. It was in 1927, that the Indian Road Development Committee appointed by the Government of India under the Chairmanship of Dr. (then Mr.) M. R. Jayakar, Bar at Law, came to the conclusion that it was beyond the financial capacity of Provincial Governments to ensure development of roads on proper lines and that they really should be looked upon as of national interest and, therefore, a proper charge on Central Revenues. One of the Committee's most important recommendations was to suggest the establishment of annual grants to be credited to a separate road development account so that unexpended balances should not lapse at the end of the financial year. The Conference of Engineers at Nagpur in 1943 suggested sound lines for the formulation of Government policy in respect of roads.

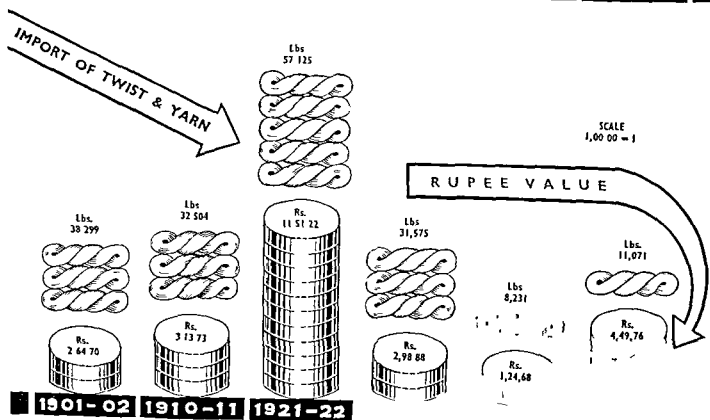
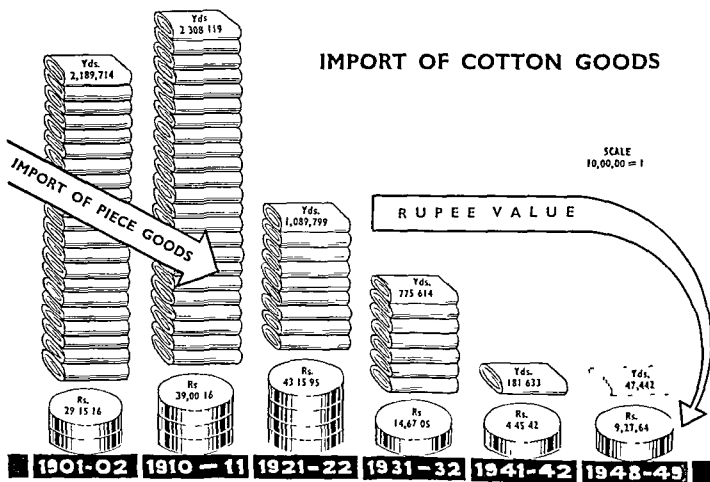
National Highways

As a result of these recommendations the Central Government have since April 1947, assumed provisionally and subject to certain conditions, complete financial liability in respect of both construction and maintenance of roads which should be accepted as part of a national system of Highways. Certain constitutional changes in regard to roads are worthy of note. According to the Constitution of India the Union List includes Highways declared by or under laws made by Parliament to be National Highways. The Central Government will thus be called upon under the new Constitution to play an increasingly important part in relation to those Highways which will be declared by or under law made by Parliament to be National Highways. While the financial difficulties in the recent years have caused a setback to the construction and progress of roads, it is to be hoped that on return of prosperity, both the Central and the Provincial Governments will embark on programmes of roads within their respective spheres of operations which will ensure a balanced development of communications. These will serve the ever increasing transport needs of the country and will not only ensure general industrial progress but what is more important ensure rural prosperity. These improved communications will not only benefit the textile industry generally but give an impetus to the use of indigenous cotton.

The Future

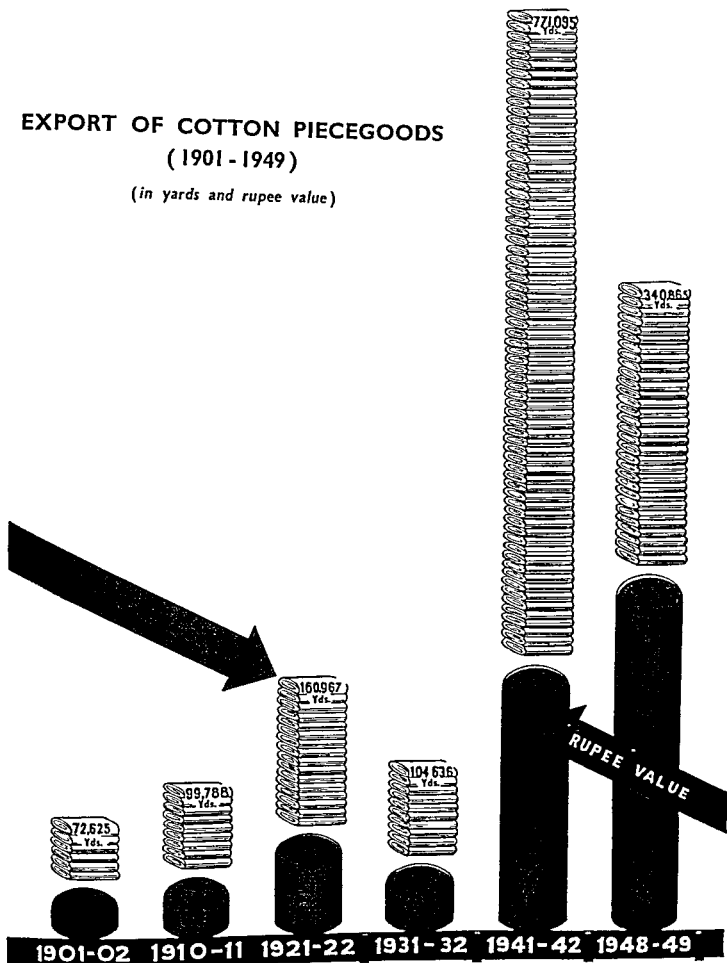
It is gratifying to note that in 1948-49 mill consumption of indigenous cotton recording a moderate improvement amounted to 3,123,915 bales as against 2,861,450 bales in the previous season. In terms of percentage, the rise in consumption works out to 10%. At present, the total mill production of cloth amounts to approximately 4,000 million yards. This, together with the handloom production which amounts to approximately 2,000 million yards means a provision of approximately 15 yards per person per annum. In the prosperous conditions which free India must secure in the years to come, it should be possible to provide much larger yardage of cloth than this for each person. No popular Government in these days can forget that cheap food, cheap cloth and cheap shelter are the three tests which the public would apply to judge its efficiency and success. It is obvious that all forms of transport and particularly rail and road transport must play an eminent part in enabling the Union and the State Governments of the future to secure these objectives.

IMPORT OF COTTON GOODS



EXPORT OF COTTON PIECEGOODS (1901 - 1949)

(in yards and rupee value)



RAMNARAIN SONS LTD.

BOMBAY
AHMEDABAD, COIMBATORE

COTTON EXPORTERS AND IMPORTERS

COTTON MERCHANTS
SPINNERS
MANUFACTURERS

MANAGING AGENTS :

THE PHOENIX MILLS, LTD., BOMBAY.
THE BRADBURY MILLS, LTD., BOMBAY.
THE DAWN MILLS CO., LTD., BOMBAY.

MEMBERS :

Liverpool Cotton Association
East India Cotton Association, Ltd.
Karachi Cotton Association, Ltd.

CABLE ADDRESS "RAMNARAYE

Ramnarain Sons (Pakistan) Ltd.
KARACHI.

A Half-Century of Textile Exports

PARADOXICAL though it may seem India's export trade in cotton textiles is far older than her textile industry. Long before the industry, as we understand the term today, came to be established on Indian soil cloth produced by skilled Indian weavers working on primitive looms had a reputation in the world outside. The new technique of power production which enabled foreign cloth to find an extensive market in India dealt a severe blow to India's export trade in textiles. Fortunately the development of the Indian textile industry not only made India self-sufficient in cloth but it also enabled her to regain a position of some importance in the export trade in textiles as the statistics of our textile exports over the last half century show.

Exports at the turn of the Century

In the year 1900-01, India exported 69.3 million yards of cotton piecegoods by sea to various countries of which 18 million yards went to East African ports, another 18 million yards to the Strait Settlements, 9 million yards to Ceylon and 8 million yards to Aden. Relatively small quantities went to Turkey, Persia, China and U.K. It is significant that the most important markets were on the East Coast of Africa where a good number of Indians had migrated. Aden and the Strait Settlements also took relatively large quantities no doubt because their geographical situation made them peculiarly suitable for entrepot trading with neighbouring lands. Ceylon as our nearest neighbour also took a substantial quantity.

Between Two World Wars

Till the outbreak of World War I the level of seaborne exports was throughout below 100 million yards per annum, a figure which was very nearly attained in 1910-11. The Great War gave the first big stimulus to Indian textile exports which reached their peak figure of 263 million yards in 1916-17. Although this figure was never reached again before World War II began, exports between 1915-16 and 1929-30 were throughout more than 100 million yards a year and as a rule nearer 200 million yards than 100 million yards. In the thirties the volume of seaborne exports declined again to well below 100 million yards per annum. This was not very surprising because in those years of depression the level of textile exports for the whole world had declined by 30% in comparison with 1928. By 1936-37, however, Indian exports were once again on the increase and in 1937-38 we exported 241 million yards which was 60% more than in 1928 even though the world index compared with 1928 stood at about 80.

Thus on the eve of World War II our exports of piecegoods had doubled in comparison with what we exported prior to World War I. The number of countries to which we exported cloth had also increased enormously and included the U.K. and U.S.A. on the one hand and Australia on the other. The main markets, however, continued to be on the Continents of Asia and Africa. Burma with 96 million yards in 1938-39 was easily our most important

buyer but it must be remembered that only a few years before Burma was a part of our internal market. Ceylon and the Strait Settlements with 18 and 17 million yards respectively ranked next in importance while most of the other countries bought quantities below 3 million yards each.

An All time Record

With the fresh outbreak of hostilities in Europe with Germany and later Japan becoming enemy countries with British industries engaged increasingly in munitions production the Indian textile industry once again had to supply cloth in larger quantities to more countries than ever before. In 1942 over 976 million yards of cloth were shipped from the shores of India—an all time record so far. Such a level of exports could obviously not be sustained for any length of time. The Indian industry did not have any large surplus capacity over and above the needs of internal consumption. The country's balance of payments position also was exceedingly good. While India continued to export cloth in the following years in spite of internal shortages it was more in a spirit of co-operative pooling of resources between countries facing a common crisis than for building up new long term markets. The level of exports was restricted by quotas and owing to a number of other reasons as well exports by 1947 declined to 279.5 million yards.

1949 — Export Drive

An export drive in cotton piecegoods was really launched only in 1949. The quota restrictions were removed. The export duty was abolished. Price control over exports to all countries was reimposed. Exports began to increase almost immediately and against the average monthly export of 27 million yards by sea in the first half of 1947 the figures of exports between July and September 1949 were 36 million yards a month on the average.

Effects of Devaluation

Then came devaluation. The alteration in the rupee dollar ratio in September 1949 enabled Indian textiles to be sold at prices substantially lower than those quoted in Japan even after the floor prices in that country had been removed. More fundamental however, was the fact that after devaluation Indian cotton became remarkably cheaper than any other cotton in the world. As a result Indian textiles became decidedly cheaper than supplies from any other country and by December 1949 the volume of monthly export was over 85 million yards. The price control over exports of piecegoods has since been removed and the monthly volume of exports is rising still.

by

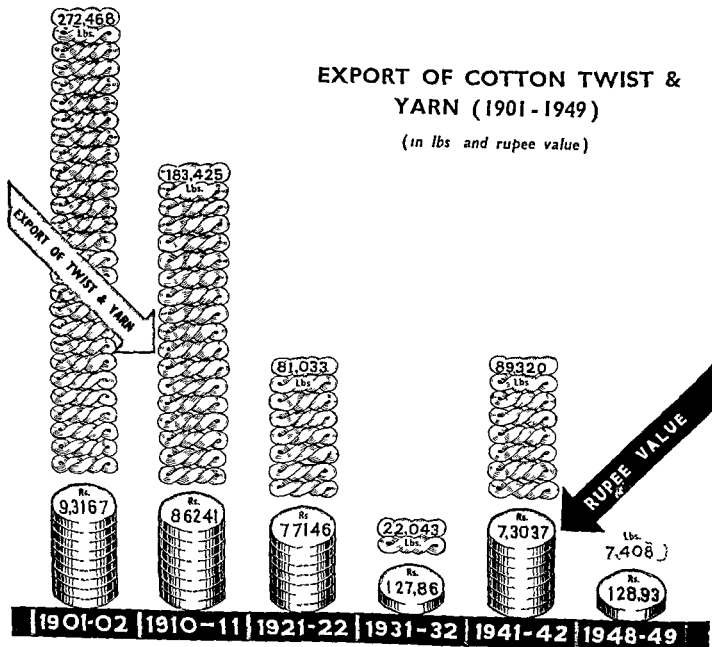
L. K. JHAICS,

Chief Controller of Exports, Government of India

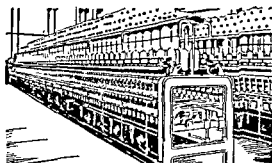
Present day Problems

Behind this somewhat simple story which statistics tell lie some fundamental problems which have not to be faced. The partition of the country in 1947 has hit the textile industry in two ways. The large cotton crop grown in the areas now included in Pakistan is no longer available to the Indian industry free from quotas, duties and other restrictions. Simultaneously a large portion of what was our internal market for textiles has become a foreign market where Indian cloth has in many cases to pay a higher duty than textiles from certain other countries. For the textile industry to keep up a fair level of production it is now necessary that India should import large quantities of cotton from all over the world. Moreover our balance of trade position is far from satisfactory and if instead of being a net exporter of cotton in substantial quantities as we were before the war we are to import cotton in lakhs of bales as we do today we have got to find new methods of earning the necessary foreign exchange. By stepping

up our exports of piecegoods the foreign exchange position has been eased. What is equally important the industry has been able to ensure a market for its product to compensate for the decline in internal consumption due to partition. Satisfactory though the position thus seems to lay the problem is by no means solved. The relative cheapness of Indian cotton compared with the cotton produced in other countries will not last for an indefinite period. In the last analysis the export potential of the country depends on greater production and more efficient production. Only by converting cotton into cloth more economically than others can our industry hope to compete effectively in the markets of the world. That it should be able to do so is a matter of as much concern to the economy of the nation as it is to the industry itself. For the fulfilment of this task it is essential that the cultivator must grow more cotton that the mills must produce more and better and cheaper cloth and that every Indian should be prepared if necessary to use a little less cloth than he otherwise would.



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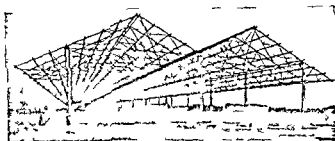
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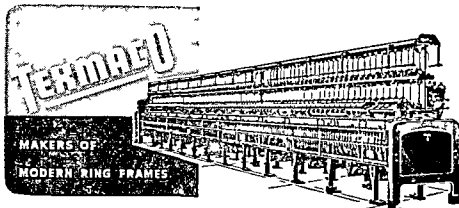
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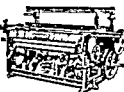
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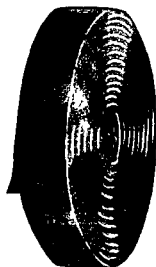
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The Financial Structure of the Cotton Textile Industry

By P. A. SESHAN, M A.,
Joint Editor, "Indian Finance"

IT is a fortunate development of the war period that the Textile Industry has been able to emerge in a greatly strengthened financial condition. Even though the Cotton Textile Industry is the largest National Industry and has accounted for an outlay of over Rs 50 crores in terms of paid up capital—not to speak of the continuous deployment of reserves in the case of the relatively prosperous units and the progressive attitude adopted by particular groups—the rate of earnings in the case of the marginal or the slightly above marginal units had not been such as to provide fully for the charges on account of depreciation or obsolescence. With the result, the problem of the various managements in the thirties was one of finding the necessary money in order to keep the machinery in a proper state of repair and to maintain progress on the technical front. Even now it cannot be said that technical efficiency is all that could be desired and only the scarcity conditions in the country and the opportunities to exploit a situation have enabled many to earn large profits.

It need not be said that the average age of machinery employed in the various factories is pretty old, and with the kill-to-death working in the war years, it has not been possible to maintain production at the peak levels of 1934-44. It is true, however, that the opportunities afforded to use to the maximum extent available capacity has enabled the Industrialists to more than offset the early losses and minimise the disadvantages of over-capitalisation in particular cases.

It is, therefore, necessary to go into the question whether the Industry is in a position to cater to the requirements of the country in full and adopt the necessary changes in the methods of production, such that at least the more efficient units could go 'finer' and the changing tastes of consumers could be properly taken into consideration. On paper it should be said that the resources available at the disposal of many of the units in the Industry are ample and that, even allowing for the increase in the cost of machinery, the necessary replacements and renewals could be effected without being obliged to raise additional capital or over-capitalise the structure of industry. The only question that has to be decided is in what way the necessary adjustments could be effected and average efficiency raised.

In so far as the initiative will be left to the various producers and there is no desire to interfere with the reordering of the industrial structure, it should be said that not much attention has been paid until now to the exact manner in which the efficiency of the industry should be increased or replacements and renewals should be effected. Unfortunately, it is difficult to formulate any definite plans in this regard. But in view of the failure of the new units and the threat to the existing level of production by the

decrease in the average efficiency, it will be worthwhile to go into the question whether the available resources could be utilised effectively and the immediate necessities of mills in particular areas inquired into.

Except for the bigger units, which have been rather keen on adding to the capacity and diversifying the lines of production, the general tendency has naturally been to wait for favourable developments and to put to effective use available resources. It is admitted that the financial position of many units is vastly different from what it was before the war period. But for the enlarged resources even the increased requirements in regard to working capital alone would have accounted for the payment of interest charges, which might usefully be utilised in increasing the dividends to shareholders. The improvement in the financial position in particular units has been necessarily uniform in pattern though it must be said that the bigger units stood to gain to a greater extent. It is true that the Excess Profits Tax operated rather harshly in the case of this industry. But the profits were truly "excessive" in respect of the Indian Textile Industry and for many years the Textile mills were the tax gatherers for the Government. Indeed, it must be said that the greater proportion of the proceeds from the Excess Profits Tax was mainly from the Textile Industry and it is not known what exactly would be the size of profits earned by the trade, viz. wholesale dealers and retailers. It is common knowledge that black marketing was (or is) rampant and that, in the absence of rationing in the earlier years and checks in the methods of distribution it was open to any one to make large profits. In recent years, however, mills have not been so advantageously placed though the trade has continued to flourish. Only in the last year, black marketing has been on a much reduced scale thanks to the reduction of the purchasing power of the average consumer and the large imports from foreign countries.

The total profits made by the industry in the peak year might be easily placed at over Rs 400 crores and the additions to reserves in the form of compulsory E.P.T. deposits and allocations to funds could be easily Rs 50 crores. An attempt has been made later in this article to judge, as far as possible, the extent of increase in net liquid assets of a number of companies. Instances are also given of units which have developed strength over a period and which by virtue of a cautious policy in regard to the payment of dividends, have added colossal sums to their reserves. What exactly these units propose to do with the sums at their disposal is difficult to be said but it can be pointed out without hesitation that the managements could be trusted to use effectively funds at their disposal and the patience of the shareholders will be amply rewarded in later years.

An attempt has been made to analyse the profits of a group of balance sheets that were published in recent years. While it has not been possible to present on a comparable basis, figures for the same sets of balance sheets for the years 1942 to 1949, it will nevertheless be possible to formulate ideas which will be in keeping with the conclusions reached above and which will give an idea of the prosperity enjoyed by the Industry till very recently. The figures for the years 1942-49 relate to the accounts that were published in the period under reference. As such it might be permissible to assume that the general trend of profits will most probably relate to the previous year or upto 6 months of the particular years in question. It is not possible to say clearly to which period the profits exactly relate as in many cases the accounts are closed annually to December or June and many companies have their half yearly closing of accounts either in June or December or March or September as the case may be. But it has to be emphasized that for a three year period the basis of comparison is strict and the conclusions derived from an analysis of the figures will be strictly valid. In the 3 years 1949, 1948 and 1947, a more detailed analysis is available, the provision for taxation depreciation allocation to funds and ordinary dividends being given separately. In the earlier years, taxation is given separately but allocations to depreciation and funds have been given under one head while dividends included payments on ordinary, preference and deferred shares.

It will be seen from the figures given below that the period of prosperity has been almost unbroken, though uneven and that the exchequer has been the beneficiary. The peak of profits was touched in 1944-45 and a fairly high level of earnings was maintained in 1945-46. Thereafter, a decline was noticeable until 1947-48. But thanks to decontrol there was again a jump in profits in 1948-49 to very nearly the level of 1945-46. The rise in profits started in 1942-43. Prior to the war period as stated previously, profits have been on an even scale and there was nothing spectacular even in the case of the most efficient units.

Seventy nine accounts published in 1949 revealed an aggregate profit of Rs 21.47 crores against Rs 11.97 crores published in 1948 and Rs 14.69 crores in 1947. The provision for taxation was Rs 9.81 crores against Rs 5.28 crores and Rs 7.27 crores previously while the charge on account of depreciation was Rs 2.12 crores against Rs 1.61 crores and Rs 1.68 crores respectively. Allocations to funds were on a generous scale, being as much as Rs 5.82 crores against Rs 2.17 crores and Rs 2.94 crores in the 2 previous years. The distribution of dividends on ordinary shares was slightly higher at Rs 2.86 crores against Rs 2.62 crores and

Rs 2.76 crores and it should be said that the bonus issue of shares fully paid up and freely issued to shareholders, did not prove to be advantageous to shareholders in getting them additional income. The limitations regarding the payment of dividends were mainly responsible for the absence of a proportionate increase in the dividend payments.

An analysis of the paid up capital shows that there was an increase in ordinary preference and deferred capital to Rs 26.89 crores in 1949 from Rs 21.34 crores and Rs 17.43 crores in the 2 previous years. The increase in paid up capital is rather significant and it must be said that it was mainly due to the issue of bonus shares by a number of companies. Otherwise, there was no need for raising additional capital. That such bonus distributions were possible will be seen from the fact that allocations to reserves in the 3 years under reference alone were Rs 10.91 crores what time the increase in paid up capital was about Rs 9.46 crores. Obviously the decision made by the Directors of the various companies to increase the paid up capital was influenced by the substantial additions to reserves and it is rather significant to note that the consolidated balance sheet does not show any appreciable change in the reserves at the end of 1949 from the level of 1947. On after the utilization of a large portion of the accumulated reserves for purposes of capitalisation and issue of new ordinary shares fully paid up to existing shareholders. Naturally, it will not be correct to form an idea of the basis of earnings on ordinary shares after the bonus issues though the figures can nevertheless be given. In 1947, the disposable profit after providing for taxation and depreciation, on the basis of disclosed figures was as much as 32.9 per cent of ordinary shares while in 1948 it had declined to 12.3 per cent, partly on account of the lower level of earnings and partly on account of the increased paid up capital. In 1949, earnings were substantially higher but the percentage expressed per ordinary share was only 15.8 per cent owing to the fact that the capital at charge was 50 per cent higher than the figure published in 1947. Though earnings were 50 per cent higher, the period of high profits and high taxes was naturally 1944-45. But even in that year it was possible for the industry to put by over Rs 6.7 crores even though it must be said that the best experience was in respect of 1949 when the net disposable profits were the highest on record, the burden of taxation being substantially lower. In the case of 69 accounts which reported a profit of Rs 21.47 crores the taxation provision was Rs 9.81 crores. In 1947, 83 accounts revealed an aggregate profit of Rs 36.47 crores while tax provision was as much as Rs 20.69 crores.

TABLE I
Trend of Profits in War and Post war Years.

—	—	Net Profit.	Taxation.	Depreciation.	Funds	Ordinary Dividend.	Carry Forward
1940	(59)	3 08.09 201	1 47 43 490	99 18 668		60 66 798	28 98,535
1943	(59)	7 94 54 659	4 64 44 594	2 19 23 131		91 93 430	23 44 921
1944	(59)	13 32 67 577	8 07 17 045	3 14 15 707		1 41 13 355	19 22 094
1945	(83)	36 47 08 672	26 69 32 033	6 70,19,644		3 37 57 334	1 05 34 575
1946	(43)	27 06 81 077	18 39 89 806	8 12 02 415		1 39 36 997	1 01 66 234
1947	(81)	17 00,51,855	8 40 27 303	1 18 38 351		3 44 04 258	1 05,80 913
1947	(69)	14 69 06,873	7 06 27,577	1 65 29 082	2 04 13,063	2 75 50 303	74 21 688
1948	(99)	11 97 38 046	5 08 15 474	1 61 49 419	2 16 88 339	2 61 09 111	70 13 924
1949	(99)	21 46 61 394	9 81 34 741	2 11 55 672	5 81 85 861	2 86 20 164	1 03 74 000

In the following paragraphs, the profits of two prominent industrial establishments in the past 13 years have been analysed. The analysis aims at a comparison of the earnings in the immediate pre war period and in the war period. It is not possible to have complete figures in respect of the earnings in the immediate pre war period but the conclusions reached are valid. It is clearly borne out that the heavy taxation in war years with the levy of the Excess Profits Tax, prevented any large distribution of profits. But the need for depositing compulsorily a certain portion of the profits and the eligibility for securing large refunds greatly strengthened the financial position of nearly each and every unit in the Industry. An effort has been made later in this article to show that big and small mills, efficient and inefficient mills, have benefited by the conditions that existed in the trade in the war period and that the accession of strength is inversely proportional to the level of earnings in the basic period. It can however be presumed that in the conditions that existed in the war period, it was possible for nearly every unit to earn large profits and that the advantages on account of relative efficiency did not affect much the rate of earnings, especially as the intention of the Textile Commissioner was to maximise production and there was no control over prices for a particular period and in the earlier stages prices were revised periodically.

When a consideration of the working of the Textile Industry is taken up, the names that occur to every mind at first thought are those of Bombay Dyeing, Kohnoor, Buckingham Carnatic, Madura Mills, etc. An attempt has been made in the following paragraphs to study the profits of Bombay Dyeing and Kohnoor Mills and confirm the conclusions reached earlier.

The Bombay Dyeing and Manufacturing Company Limited earned a total profit of over Rs 11.21 crores in the years 1936-1947 both inclusive. The figures relating to profits in the years 1936-39 do not include the provision for taxation but it should be said that taxation was not heavy in these years and out of the net profit of Rs 81.6 lakhs for 1936-39 (both the years inclusive) not more than Rs 30 lakhs could have been paid as taxes. It will therefore, be correct to assume that the aggregate profits in the

12 year period under consideration was round about Rs 11.5 crores. In the period of high profits, taxation has been rather heavy, the Excess Profits Tax being first levied in 1941-42. Of the aggregate profit of Rs 11.5 crores, the provision for taxation alone amounts to Rs 7.4 crores, the highest profits and highest taxes being made out of the earnings for 1943. Obviously, the provision in the case of Bombay Dyeing includes to a certain extent the deposits compulsorily payable to the Government and to that extent it is not possible to say what exactly is the net provision for taxation. But an analysis of the balance sheets for the years under reference will show the growth in the balance sheet and the net addition to assets. Even on the assumption that Rs 7.4 crores was provided only for taxation purposes, the net earnings were Rs 3.81 crores of which Rs 2.03 crores related to 1943-47 Rs 96.4 lakhs to 1940-42 and Rs 81.6 lakhs to 1936-39. It will be readily seen that in one particular year alone it was possible to earn very nearly the whole of the profits for 1936-39. It is rather curious to note that, in the period of high profits, the provision for depreciation was not very heavy, presumably because in the earlier years, the plant has been depreciated heavily and with the large sums available in the various reserves, it was not considered necessary to allocate huge sums. As such out of the net profit of Rs 3.81 crores after taxation, the provision for depreciation was Rs 76.32 lakhs as much as Rs 40.96 lakhs being provided in the years 1936-39. The shareholder was obviously benefited though the benefit was not in any way commensurate with the increase in earnings. Allocations to funds were compulsory in many cases and voluntary in others. Nevertheless it should be said that the return on investments in 1943-47 was very satisfactory and that on the paid up capital of Rs 62.75 lakhs before the reserves were capitalised and the bonus shares were issued in 1947, the original shareholder had more than recovered his investment. The aggregate amount paid by way of dividends was Rs 1.29 crores on which only Rs 6.25 lakhs was paid in 1936-39 and the maximum dividend was distributed in 1942 and 1943. The average dividend for 1936-39 was only 13½ per cent dividends of 10 per cent each being paid in respect of 1936-37 20 per cent in 1938 and 14 per cent in 1939.

TABLE II
BOMBAY DYEING AND MANUFACTURING COMPANY LTD
Analysis of Earnings for 1936-48

Year ended December	Net Profit before provision for taxation and depreciation	Tax on	Depreciation	Allocations to funds	Dividend Amount	Dividends % Ordinary
1936	15.54 366*		9 77,573		6 27 450	10
1937	18.61 112*		10 51 052	1 75 000	6 07 450	10
1938	27.65 248*		10 43 184	4 50 000	12 64 900	20
1939	19.99 076*		10 24 389		8 78 430	14
1940	12 40 700*		6 56 805		7 62 940	12
1941	6 75 512	24 05 000	5 43 038	9 98 600	15 05 680	24
1942	1 61 48 845	1 10 00 000	4 85 213	20 13 278	25 09 800	40
1943	3 12 50 004	2 79 00 000	4 40 036		25 09 800	40
1944	2 30 84 511	1 64 00 000	3 99 375	47 50 000	18 97 250	30
1945	1 59 90 715	1 14 50 000	3 70 925	25 09 000	18 92 350	30
1946	85 25 168	51 50 000	2 49 461	14 73 729	16 31 370	26
1947	41 33 078	18 60 000	3 60 369	5 48 205	15 05 680	12
1948	1,02,29 658	52 00 000	3 59 570	30 00 000	16 58 468	13 1/2

* After tax on

In the same period Kohinoor Mills also made a good showing and the residual profits worked out very much in the same ratio to total profits before taxation. In the period 1936-47, the net profit, before taxation, amounted to Rs 6.99 crores out of which Rs 4.29 crores had to be given away to the State and only Rs 2.7 crores remained for the benefit of the shareholder, in 1943-47, the bulk of the profits was made, being Rs 5.16 crores against Rs 1.49 crores for 1940-42 and Rs 33.69 lakhs for 1936-39. The net profits,

after taxation were Rs 1.72 crores, Rs 63.58 lakhs and Rs 33.69 lakhs respectively. After paying dividends to the extent of Rs 19.27 crores on ordinary shares, the addition to funds was Rs 19.4 lakhs and the provision for depreciation Rs 79.68 lakhs. The paid up capital of the Company was only Rs 45 lakhs in 1945. The rate of earnings in one particular year was nearly 100 per cent on capital after providing for taxation.

TABLE III
KOHINOOR MILLS CO., LTD
Analysis of Earnings for 1936-48

Year ended December	Net Profit before provi- d ng for taxat on and depreciat on	Taxation.	Depreciation.	Allocations to funds	Dividend Amount	Dividends % Ordinary
1936	6 15 117*	—	3 19 864	70 000	2 00 000	10
1937	8 17 938*	—	5 29 339	33 000	2 4 000	12
1938	11 12 751*	—	5 78 311	2 00 000	3 17 11	15
1939	8 33 080*	—	4 14 114	—	4 00 000	18
1941	9 02 670*	—	4 47 170	—	4 4 267	18
1942	43 92 733	21 66 490	8 09 9 8	4 55 000	8 10 000	27
1943	98 40 836	64 11 876	7 74 217	1 00 0 00	12 09 000	40
1944	174 58 02*	1 30 00 000	7 91 717	23 00 000	16 20 000	49
1945	1 41 14 716	1 05 61 000	— 53 365	14 50 000	12 60 000	28
1946	1 01 61 400	74 83 5 0	6 3 872	9 50 000	11 25 000	25
1947	6 74 538	28 73 440	8 91 851	5 31 760	10 00 000	18
1948	37 12 557	6 40 000	8 31 004	10 50 000	10 12 500	101.5†
1945	1 19 34 428	50 00 000	11 6 216	4*27 500	—	—

* After taxation

After the issue of bonus shares

The accession of strength would have been even more pronounced if taxation had not been heavy and the exchequer accounted for nearly 80 per cent of total earnings. But it is abundantly clear that the rate of earnings was running at very high levels and that even the residual profits have been such as to be reflected in substantially larger assets.

It is not clear, however, whether the resources available at the disposal of the established units will be fully sufficient for replacement purposes and at the same time leave enough for meeting the requirements for day-to-day working. Perhaps, a planned programme of replacement would enable an effective use of available funds and it might be found at the end that the rupees which were accumulated in the period of inflationary conditions could be made to fetch good value ultimately. The considerations in this regard might have been responsible for the slow progress in certain directions and not many units have been anxious to utilise fully available funds. In the case of such units as were able to effect substantial additions in the period of low prices and in the case of such units which came into being in the thirties, it could be said that the addition to funds is really worthwhile and that the shareholders are in a position to derive complete benefit from accumulated reserves.

The general strength of the cotton textile industry on the financial front will be evident from a cross section of the balance sheets of 24 companies analysed over a 3 year period, i.e. between 1945 and 1948 and an analysis of the balance sheets of two leading units over a decade and a half.

The consolidated balance sheet of 24 companies which published their figures in 1949, will show that there has

been effort to reduce as far as possible not indebtedness and that except in rare cases the squeeze has not been felt as in Britain and other countries. No large expenditure has so far been made in replacements and renewals of machinery and available funds have been very usefully employed to avoid interest charges which would otherwise have been incurred. It is true that the recent rise in prices for raw materials and the need to keep larger stocks have resulted in an increase in current liabilities. But as investments are disposable and E.P.T. deposits can be had when there is need, there is resiliency in the financial structure. It may very well be that, at the time large scale orders are placed for machinery and stores and spares, there will not be any need for investing funds on the same scale as now in high priced cotton and finished goods.

The total liabilities of 24 balance sheets published in 1945 were Rs 4.29 crores. The paid up capital in ordinary, preference and deferred shares and debentures amounted to Rs 10.15 crores. The ordinary capital amounted to Rs 7.87 crores, preference capital to Rs 2.08 crores, deferred capital to Rs 50 lakhs and debentures to Rs 5.61 lakhs. The reserve fund was as much as Rs 11.47 crores while debts including dividends were Rs 20.46 crores and undistributed profits Rs 23.98 crores.

The balance sheet for the same companies published in 1948 revealed an increase in ordinary capital by Rs 1.37 crores to Rs 9.24 crores and preference capital by Rs 45 lakhs to Rs 2.52 crores. The deferred capital was unchanged while there was an increase in the loan capital to Rs 30 lakhs from Rs 5.65 lakhs. Obviously, the increase in ordinary capital was due to the issue of bonus shares, there being no need for raising additional capital at any time. Even after the capitalisation of reserves amounting

to Rs 181 crores, reserve funds rose by Rs 186 crores while current liabilities declined by as much as Rs 6 crores from Rs 14.46 crores. Undistributed profits were lower at Rs 4.16 lakhs against Rs 23.98 lakhs. The contraction in the balance sheet total was thus mainly due to a reduction in current liabilities and it will be readily seen that appreciable benefits were derived by the accumulation of reserves.

On the assets side, replacements and renewals and additions to machinery led to an increase in capital outlay to Rs 26.52 crores from Rs 23.4 crores according to the balance sheet published in 1945 but this increase in capital outlay did not mean any blocking of available funds as the provisions on account of depreciation were enough for this purpose, there being a rise in the depreciation allowances to Rs 18.95 crores from Rs 15.46 crores. As a result, the net block was actually lower at Rs 7.58 crores against Rs 7.94 crores. Stores and spares rose to Rs 3.15 crores from

Rs 2.26 crores while outstandings were not very much changed at Rs 4.96 crores (Rs 4.85 crores). There was actually a decline in investments to Rs 4.68 crores from Rs 5.44 crores while the repayment of EPT deposits accounted for a return of Rs 2.1 crores the balance in this account being Rs 2.27 crores against Rs 4.38 crores. With an increase in stocks and stores cash balances declined to Rs 2.78 crores from Rs 4.62 crores. Stores were as much as Rs 15.3 crores against Rs 13.45 crores. Net liquid assets were higher at Rs 18.64 crores against Rs 14.54 crores.

Even if it were necessary to repay the preference and debenture capital in full, the residual sum available for distribution on ordinary and deferred shareholders was ample in many cases being more than twice the paid up sum. It is also relevant to remember in this connection that shareholders have been benefited by the capitalisation of reserves in many cases and the ordinary capital is in some instances more than double the previous figures.

TABLE IV
Consolidated Balance Sheet of 24 Companies
(000s omitted)

LIABILITIES			ASSETS		
	1948	1945		1948	1945
Capital	Rs.	Rs.		Rs.	Rs.
Ordinary	924.48	747.16	Cross Block	26.82.15	23.40.01
Preference	250.23	207.85	Depreciation	18.94.65	15.48.03
Deferred	50.00	50.00			
Debentures	30.00	5.61	Net Block	7.57.60	7.94.18
Reserve funds	13.93.97	11.73.81	Stores	3.15.30	2.26.35
Debits	14.40.94	10.43.33	Outstanding	4.96.12	4.85.23
Carry Forward	4.16	23.98	Investments	4.68.42	5.44.85
			E P T Deposits	2.27.01	4.37.56
			Cash Balances	3.97	4.62.26
			Stocks	15.29.58	13.44.89
Total Rs	40.67.01	32.94.34	Total Rs.	40.67.01	32.94.34

It will be clear from the foregoing that the financial structure of the Cotton Textile Industry has improved considerably in the past decade and that, nearly all the important units are in a position to provide fully the funds needed for renewals and replacements. The argument has been put forward that on the basis of replacements costs it will not be possible to renew machinery wherever necessary. But if it is remembered that the initial and double depreciation allowances in respect of machinery will be available for a fairly long period and that the textile units can choose their plans which will bring the greatest benefit, the need is for a carefully formulated policy of development and not a plan for meeting the expenditure under various heads. It might, however, be said that the availability of rupee funds at the disposal of the cotton textile industry does not necessarily bring in the requisite foreign exchange. But the problem is one for consideration by the

Government and not by the industry and it cannot be said at any moment that the expansion plans have been held up merely because of this difficulty. The main reason for the delay in effecting additions to plant and machinery has been due to the difficulty in obtaining the necessary equipment. There has also been a desire to make the fullest use of available funds and, as has been stated earlier in this article and explained more fully in the succeeding article, the anxiety is to bring about such a change in the general structure of the industry which will enable the various units to cater to the changing and changed tastes of the consumers and at the same time retain the health of the financial structure. The efficient units are certainly capable of looking after their requirements. Only, if in their case a planned policy could be followed and extensions speeded up, the future of the cotton textile industry would be assured.

POST-PARTITION PATTERN OF DEVELOPMENT OF THE INDUSTRY

By P. A. SESHAN

AT the time the Post War Planning Committee (Textiles) submitted its report to the Government of India, there was no suggestion that the country would be politically divided into two parts and that it would be necessary to revise the plans for development of the Indian Textile Industry. It is common knowledge that the consumption of cloth and yarn has been progressively on the increase in the past decade and that during the war period, with the large demand on the industry from the Defence Services, an acute shortage was experienced in respect of the requirements of the ordinary citizen. Even now, with the considerable reduction in the requirements of the Defence Services, it is not possible to ensure a liberal supply to every citizen and in particular areas, and it has been found necessary to continue restrictions regarding sale of cloth and yarn in certain areas. There is no doubt that the reduction of the offtake on account of Pakistan and liberal imports from Britain and other countries have considerably eased the supply position. But the problem of development of the industry, both from the point of view of the established units and the promotion of new units, has to be actively considered and definite decisions taken. The Post War Planning Committee was of the view that the further development of the industry could best be carried out in the deficit areas as it was strongly felt that consumer goods industries could be actively encouraged in the areas in which there was a deficit and there was a ready market and the necessary facilities could be made available. The need for regional development was of course the main consideration though it was recognised that the required skilled labour might not be available in particular places and that the concentration of the industry in specific areas would continue to be a feature for some time.

From a glance at the figures given opposite, it will at once be seen that between Bombay and Ahmedabad a good portion of the total production is secured and that all the other zones are deficit in their requirements. The division of the various areas spindlewise will show that as on January 1st, 1945, 594 million spindles were in respect of the Bombay surplus area out of a total of nearly 10.3 million

spindles. The next biggest concentration was in the south zone with 1.96 million spindles. UP came third with 773 lakhs spindles and Bengal fourth with 4.18 lakhs spindles. The next biggest concentration was in the south zone with 1.96 million spindles. UP came third with 773 lakhs spindles and Bengal fourth with 4.18 lakhs spindles.

TABLE I
Spindles installed in India on 1st January 1945

Area or Zone as defined in the Cotton Cloth Movements Control Order, 1943	Spindles installed as on 1st January 1945
* 1. Bombay Surplus Area	5,941,162
2. Sind (including Baluchistan) Deficit Zone	2,216
* 3. Punjab (including Delhi) Deficit Zone	224,023
4. U.P. Deficit Zone	773,288
5. Bihar Deficit Zone	25,040
* 6. Bengal (including Assam) Deficit Zone	480,924
7. Orissa Deficit Zone	
8. G.P. Deficit Zone	374,030
9. South Deficit Zone	1,955,538
10. Rajasthan Deficit Zone	519,222
Total	10,295,445

* Includes the areas that have since gone over in full or part to Pakistan.

Expressed in yardage Bombay had a surplus of 2,169 million yards (on the basis of production of 1945) while the rest of the country including the territories now constituting Pakistan had a deficit of 3,699 million yards. The average per capita consumption has been assumed as 18 yards per annum, the highest consumption being in respect of Bombay and Punjab with 21.5 yards per head.

This deficit of 1,530 million yards was proposed to be made up by the installation of additional capacity either in existing mills or new units. Allowing for an export of 800 million yards the calculations regarding the quantity of 7,200 million yards per year available for consumption have been based on a mill production of 4,800 million yards a handloom output of 1,500 million yards and new production of 1,700 million yards. In all cases it is assumed that 10 per cent of the production will be exported the total quota allotted for exports being 800 million yards.

TABLE II

Estimated Annual Requirements of Cloth of each Area or Zone (1946-47)

1	Area or Zone as defined in the Cotton Cloth Movements Control Order, 1943.	Population figures rounded up to a total of 400 million based on the 1911 Census report.	Planned limits of allocation of Cloth yards per head per annum.	Estimated annual total requirements of cloth per annum.	Estimated cloth that will be available annually for civil consumption produced by existing mills after allowing for export of 400 million yards.	Estimated annual production of handloom cloth after allowing for export of 150 million yards.	Total of columns 5 and 6, i.e. total cloth available for civil consumption annually from existing handloom and spinning Mills.	Annual surplus (+) or deficit (-) i.e. Difference between Columns 4 and 7.
1.	Bombay surplus area	34	24.5	830	2,878	121	2,999	+ 2,169
2.	Sind (including Baluchistan) Deficit Zone	6	16.5	97	—	5	5	- 91
3.	Punjab (including Delhi) Deficit Zone	46	24.5	1,100	157	168	328	- 177
4.	U.P. Deficit Zone	53	16.5	995	310	132	472	- 482
5.	Bihar Deficit Zone	37	16.5	610	12	50	62	- 648
6.	Bengal (including Assam) Deficit Zone	75	16.5	1,235	220	170	390	- 845
7.	Orissa Deficit Zone	17	16.5	590	—	72	190	- 488
8.	C.P. Deficit Zone	21	16.5	316	118	31	31	- 249
9.	South Deficit Zone	83	16.5	1,366	279	599	878	- 166
10.	Rajputana Deficit Zone	23	16.5	379	318	4	320	- 59
	TOTAL	400	13.7	7,200	4,320	1,350	5,670	+ 2,169 - 3,699
								Nett - 1,530

* Includes the areas that have since gone over in full or in part to Pakistan

On the basis of the consumption of the pre war years and on the recognition of the need for the dispersal of the industry, it was estimated that the allocation of spindles in respect of planned extensions and new mills would be zone-wise as follows:—

The office of the Textile Commissioner asked for the installation of only 2,720,961 spindles, 1,205,674 spindles being fine and 1,515,287 spindles coarse. They did not allocate any additional spindles for the Bombay surplus area and the largest number was secured by Bengal with Punjab coming second. The Planning Committee, however, decided to increase the total number of spindles to be newly installed to 2,752,000, 1,254,000 fine and 1,498,000 coarse. The Bombay surplus area secured an allotment of

1,52,000 fine spindles to be mostly utilised by existing units. There was a reduction in the figure for Sind, Orissa and Bihar on the score that the necessary skilled labour was not available locally. It was also said that it would not be possible to produce fine yarn without the requisite experience. In order to effect regional development, it was suggested that the quotas in respect of Bihar and Orissa might be surrendered to Bengal in respect of that portion which was not taken up by the first mentioned two provinces. It was also said that, in respect of other areas, unfulfilled quotas might be utilised by the Bombay or South zones. The allocation of spindles along with figures of existing spindles will be noticeable from another Table given below:—

TABLE III

Allotment of 1.25 million fine and 1.5 million coarse spindles to various areas and zones recommended by the Post-War Planning Committee (Textiles)

Area or Zones as defined in the Cotton Cloth Movements Control Order, 1943	Spindles installed on 1st January 1945	Allotment of New Spindles 1.25 million fine and 1.5 million coarse 2.75 million			Calculated Production of cloth from additional spindles in million of yards		
		Fine	Coarse	Total	Fine	Coarse	Total
(1)	(2)	(3a)	(3b)	(3c)	(4a)	(4b)	(4c)
1. Bombay Surplus Area	5,241,164	152,000	—	152,000	64	—	64
2. Sind (including Baluchistan) Deficit Zone	2,218	—	75,000	75,000	—	58	58
3. Punjab (including Delhi) Deficit Zone	224,023	152,000	423,000	575,000	84	232	316
4. U.P. Deficit Zone	173,288	152,000	198,000	350,000	64	155	219
5. Bihar Deficit Zone	25,040	38,000	162,000	200,000	16	127	143
6. Bengal (including Assam) Deficit Zone	489,324	150,000	260,000	410,000	80	204	284
7. Orissa Deficit Zone	—	38,000	112,000	150,000	16	87	103
8. C.P. Deficit Zone	374,935	76,000	74,000	150,000	32	58	90
9. South Deficit Zone	1,955,533	350,000	120,000	470,000	180	94	274
10. Rajputana Deficit Zone	619,222	76,000	74,000	150,000	32	58	90
Total	19,295,445	1,254,000	1,498,000	2,752,000	628	1,173	1,701

* Includes the areas that have since gone over in full or in part to Pakistan

The question now arises about the extent of progress made in regard to further development of the industry and the position of the industry after the partition of the country. It can at once be said that not much progress has been made in installing new spindles especially as import of new

machinery has been difficult and it has not been possible, till recently, even to secure the requirements of established units for purposes of renewals and replacements. At first there was some expectation that the new units would be able to make significant progress and that it would be pos-

sible to avoid concentration in existing units. The expectations in this regard have not, however, materialised as the new units have not been able to make use of the funds at their disposal and the prospectus estimates have in many cases proved to be incorrect. It was not expected that there would be such an increase in prices for capital goods and that it would take such a long time for the goods to be secured. As such the question does not arise at the moment, as in the case of the sugar industry, whether it would be permissible to install additional capacity or whether development should be on an ordered and an orderly basis. It would certainly be a great advantage if the new units, which were floated in the boom of 1945-46, could be enabled to function and the allotted quotas in respect of spindles and looms utilised. But barring one mill in the Delhi deficit zone and another mill in the Orissa deficit zone there have been no reports of complete new units coming into existence, though it is still stated that efforts are being made to import second hand machinery or embark on projects which are not entirely connected with the original schemes. The question, therefore, arises whether the original schemes have to be revised and whether the original development schemes as envisaged by the government, would prove to be successful. It might be said that in the absence of a satisfactory agreement with Pakistan, there will be a surplus of 400 million yards and that allowing for the lower level of consumption on account of partition, the additional production of 1,700 million yards would not be necessary. In the scheme for producing an additional 1,700 million yards, about 300 million yards will automatically go out on account of the allotment of spindles for the territories now in Pakistan. Thus, there will still be need for extending output by 1,000 million yards even if it is assumed that Pakistan did not account for any portion of its usual consumption of 400 million yards from the Indian Textile Industry. The capacity for production has been retained almost fully in the Indian Union, only a few thousands of spindles going over to Pakistan.

Under the circumstances, the question has therefore, to be decided how best further expansion could be carried out and how the inequality in production in the various zones could be reduced. As stated at the beginning Bombay will still be the prominent producer and account for a good portion of the requirements of the rest of the country. The south deficit zone is perhaps highly suited for further development as also the C.P. deficit zone. Expansion in North East India would be necessarily slow though if the promoters were willing and active, better progress could be reported. In order to be able to achieve the target of 4,300 million yards for 1950 and provide the necessary quantity of yarn for the handloom industry, attention should be paid first of all towards increasing the efficiency of existing units. Thanks to the improvement in the financial position of most of the mills in the industry, it can be said that replacements and renewals could be effected on ordered lines. The Central Government should take particular care, in conjunction with the States, to meet the requirements of the various units and help in the formulation of specific schemes. Private enterprise has not been lacking in its efforts so far and it must be said that only the existing


units have been able to report important progress, Kohinoor, and Buckingham Carnatic being outstanding examples. If side by side with the improvement of the industry attention could be paid to the promotion of new units or the effective functioning of such of those units as formally came into being in 1945-46, a plan would emerge which might roughly accord with the intentions of the Post War Planning Committee. Between 1945 and 1950 conditions have so thoroughly changed that it would be necessary to look at the various problems from a completely different angle. More important than any question is the fact that the tastes of the consumers have vastly changed and that the industry has to go 'finer'. This is not an easy task as, apart from the technical difficulties involved, there is the problem of readjustment of machinery. Also the tendency to go 'finer' would necessarily result in a lower output of yarn and cloth produced.

Apart from the financial and technical aspect, there is also the difficulty in securing raw material supplies. Before the partition of the country, there was no problem of securing adequate supplies of short, medium and long staple cotton because the best varieties were grown in Pakistan and special types of cotton were imported only for mixing purposes. At the present moment, however, the industry is dependent for its requirements of over 1 million bales of long staple cotton a year on outside sources which have to be secured mainly from Pakistan.

Over a period, the problem of cotton supplies would certainly be solved as it would mean a reduction in the cultivation of short staples and an increase in the acreage under long staple cotton. In view of the success which has attended the schemes of the East India Cotton Association in encouraging the development of long staple cotton, there is no need for any misgivings in this regard. But the progress would necessarily be slow. In the meantime, the production programme will have to be adjusted in such a way that the capacity of the industry is fully utilised and at the same time the requirements of the exchange budget are properly fulfilled. It must be said that the recent proposals of the Government of India are essentially sound in nature, it being expected that, with an export of 800 million yards per annum and the removal of restrictions on prices for exports the additional expenditure in foreign exchange for importing 1 million bales of foreign cotton would be found from increased exports of finished goods.

A revision of the schemes for the development of the industry in relation to the changed conditions in respect of raw material supplies, will necessarily mean hard thinking and effective co-ordination between the producer, the cotton grower, the States and the Central Government. It is only to be hoped that the problems of the biggest national industry in India will be properly understood and solutions evolved which will retain for the industry the advantages that were secured during the war years. There must never be a return to the depression days of the early thirties. In view of the vast potentialities of the home market and the capacity of the industry to solve its own problems, the provision of facilities should be more than sufficient, though the development of the industry on new lines will need constant supervision and encouragement.

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THE COTTON TEXTILE INDUSTRY AS DETERMINANT

By E. P. W. da COSTA, M.A. (Oxon.)
Editor, "Eastern Economist"

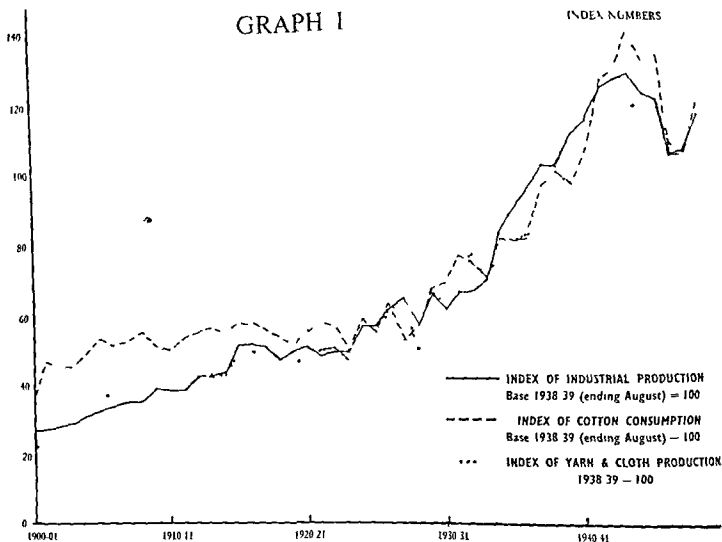
IT is one of the commonplaces of Indian economics that the cotton textile industry is our largest organised industry whether in gross output value, net value added by manufacture, or employment. But it is not recognised even by those closely connected with industrial affairs how dominating the textile industry has been in Indian industry. Lord Kelvin is credited with the remark that we know very little about a thing until we have contrived to measure it, and measurement of one thing in isolation is very far from giving knowledge of any consequence. It was in some such sense that it was asked what they know of Plato who only Plato know. It is clear that an appreciation of the position of the cotton textile industry requires measurement of industrial production generally as well as of employment and other things. The purpose of this article is to attempt such an analysis using available figures for the fifty years of this century. For a centenary volume one might have hoped that the period would be a hundred years. Un-

fortunately, figures are not available for many items prior to 1900 and in fact even the figures in this half-century are not of uniform worth.

Production

For total production as well as for the cotton textile industry, the method followed has been to link 'The Eastern Economist' Index of Indian Industrial Production with Dr Meek's index. The accompanying graph shows the results so obtained and it will be obvious how close the correspondence is in every way. There is some divergence between indices of cotton consumption and cloth and yarn production in a manner which suggests that the time lag involved in production is significant. For this purpose and to suggest some further analysis in regard to figures which seem somewhat unusual, both cotton consumption figures and production figures are given in the following Table. (Please turn over)

GRAPH I



INDUSTRIAL PRODUCTION

GRAPH II

YEAR ENDED AUGUST 1939 = 100

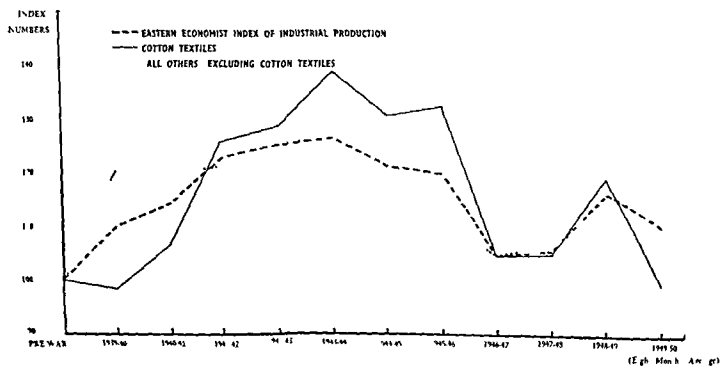


TABLE I

Fiscal year April to March	No. of Mills	Production (in yarn lbs.) (in Million lbs.)	Production of woven goods (in Million lbs.)	Cotton seed (in 100 bales of 500 lbs.)	Industrial production index
1900	178*	353	99.7	1,352	26.6
1901	178	478	119.7	1,352	27.4
1902	181	578	122.8	1,352	28.3
1903	183	670	135.1	1,739	29.4
1904	191	578	168.7	1,745	31.2
1905	194	681	163.9	1,879	33.8
1906	199	654	166.8	2,024	34.0
1907	219	639	183.1	1,890	35.5
1908	224	657	192.4	1,922	38.8
1909	222	627	228.8	2,009	39.3
1910	217	608	215.8	1,935	38.1
1911	233	625	208.6	1,908	38.6
1912	236	689	236.5	2,050	43.2
1913	240	683	274.4	2,098	42.7
1914	240	652	277.0	2,143	44.0
1915	237	723	332.3	2,103	51.5
1916	238	681	377.7	2,199	51.9
1917	249	661	381.4	2,198	60.6
1918	250	615	349.6	2,038	47.3
1919	242	639	353.8	2,014	49.8
1920	245	660	367.5	1,952	60.6
1921	249	694	402.5	2,120	48.1
1922	280	708	405.3	2,204	49.8
1923	274	617	401.7	2,152	49.8
1924	275	719	408.8	1,918	62.0
1925	270	686	435.0	2,228	56.4
1926	277	807	538.8	2,112	61.8
1927	281	809	567.8	2,417	64.7
1928	294	649	415.7	2,010	58.9
1929	301	834	662.2	2,161	67.2
1930	312	867	690.4	2,574	61.8
1931	314	866	672.3	2,333	66.4
1932	311	1016	694.9	2,911	66.4
1933	320	921	645.9	2,837	7.2
1934	338	1001	736.6	2,704	82.9
1935	365	1059	761.4	3,123	89.4
1936	379	1054	782.3	3,110	94.6
1937	370	1160	864.2	3,147	102.1
1938	389	1289	908.4	3,093	101.7
1939	389	3259	4269	3,812	110.3
1940	398	3084	4013	3,680	114.2
1941	390	2373	4299	4,251	123.2
1942	398	3943	4494	4,740	125.5
1943	401	3834	4109	4,890	126.8
1944	405	4501	4571	4,843	121.7
1945	417	4127	4720	4,909	120.0
1946	421	4037	4676	4,550	105.0
1947	421	3845	3890	3,972	105.9
1948	421	3824	3770	4,283	115.9

* The figures are not comparable

† The figures relate to the year ending 31st August

‡ The year 1900 corresponds to 1900-01 'The Eastern Economist Index has been carried back to 1932-33 and has been linked with Sir David Meek's Index (base 1911-12 to 1913-14) upto 1911-12. Figures before 1911-12 have been calculated on base 1905-06 and linked with the figure for 1911-12

The divergencies between the textile curve and the total production curve are as interesting as the periods where the curves converge. In the year 1905-06 the textile industry contributed as much as 60 per cent to the gross industrial production in what are now organised industries. While this figure has shown a fairly steady tendency to fall indicating a fall in the dominating position of the cotton textile industry, the rate of rise of industrial production has only departed significantly from that of the cotton textile industry after the year 1935. This is in part due to the larger role played by sugar and the extension of jute, but even here if we take the cotton consumption figures, the parallelism is very close. In 'The Eastern Economist' Index, the weightage given to cotton textiles is 40 in 100, on the basis of gross output value in 1939. This in itself accounts for quite a great deal of the parallelism, but what is interesting is that, although the cotton textile industry is

less than half of total output in this index, fluctuations so closely follow the textile industry trend

Fluctuations

The extent to which the general index has responded to cotton textiles is, perhaps, even better illustrated by an examination of fluctuations in the last ten years. The three curves in Graph II show the cotton textiles index, the general index, and a computed index of other items on the hypothetical assumption that there was no cotton textile production. In some respects, the results here differ from what one might expect at first sight. The non-cotton-textile output rose to a peak in 1939-40 and is nearly back now where it was then. At the present time, it is the recovery of the non-textile section which is holding the general index. If this recovery were not present, the General Index would be almost back to its pre-war level. For almost the first time there is a significant influence moving the opposite way, the total index is still downward but the components are almost equal and opposite. If this trend should continue, the cotton textile industry will be contributing less than a third of total production, a factor which may require a revision of the index which gives it a high relative weight (P.T.O.)

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Employment and Labour Relations

It is of interest to follow out the part played by the cotton textile industry in the direction of employment and of labour relations. The first of these is shown in Table II and the second is a graph which indicates the number of man-days lost in industrial disputes in India since 1921. The dominance of the cotton textile industry in the latter case particularly is too obvious to need any explanation.

(See GRAPH III below)

Conclusions

The broad conclusions which this analysis suggests practically draw themselves. Industrial production in India has been in the past as nearly as may be a function of cotton textile production, but the dominance of the industry is being reduced absolutely and relatively in respect of fluctuations and at the present time it probably occupies a less significant place than at any time in the last fifty years. There are, of course, temporary factors, such as the shortage of cotton responsible for the decline. But it should be clear enough that this decline is large enough in itself to offset production elsewhere. Hitherto the cotton textile industry was significant in the manner in which it raised the index, at the present time it is acting as a drag, its dominating position is not raising the index but pulling it down.

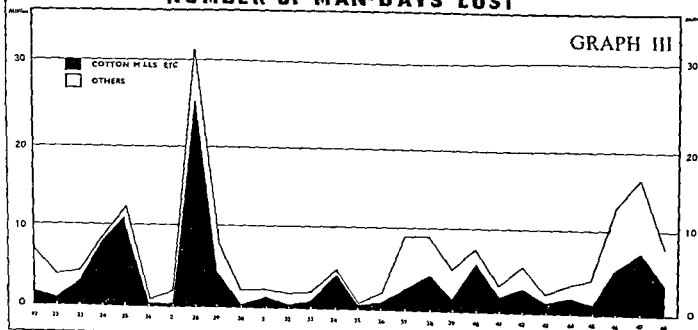
TABLE II (In 000s)

Year	Employment in Cotton Mills	Total Employment in Orgs. in India	Man days lost in Cotton Industry etc.	Total man days lost
1909	220	769	—	—
1909	215	86	—	—
1910	214	703	—	—
1911	221	793	—	—
1912	247	800	—	—
1913	244	838	—	—
1914	241	851	—	—
1915	250	1004	—	—
1916	266	1061	—	—
1917	271	1076	—	—
1918	289	1120	—	—
1919	282	1172	—	—
1920	304	1234	—	—
1921	312	1266	1794	5501
1922	322	1361	910	2831
1923	314	1409	2098	4678
1924	335	1456	8111	9607
1925	320	1497	11654	12474
1926	341	1518	79	864
1927	343	1533	350	2018
1928	333	1520	21851	31623
1929	312	1553	6353	1916
1930	338	1628	364	2168
1931	341	1431	1409	2313
1932	306	1490	546	1591
1933	367	1400	1134	2184
1934	343	1487	4375	4770
1935	437	1611	672	893
1936	476	1652	1043	2347
1937	472	1678	2671	8951
1938	516	1738	4442	9199
1939	457	1751	1469	4993
1940	491	1844	6674	7577
1941	590	2186	1868	3331
1942	611	2282	2852	6780
1943	631	2436	1345	2543
1944	667	2577	1988	3447
1945	658	2643	1140	4054
1946	710	2914	5920	19718
1947	633	255	7304	16500
1948*	635	2361†	3744	7836
1949	—	—	2580	6491

* First half of 1948 only

† Estimated

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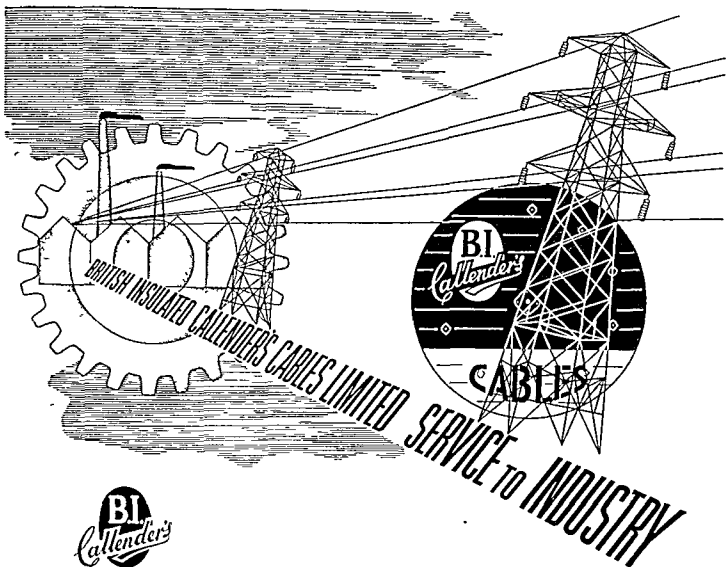


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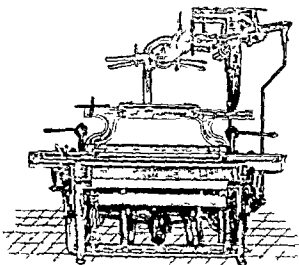
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THE EMPLOYMENT SERVICE IN INDIA — ITS ROLE IN THE RECRUITMENT OF TEXTILE WORKERS

By Dr N DAS, Ph D, ICS

Director General of Resettlement and Employment,
Ministry of Labour, Government of India

THE National Employment Service in India was set up as one of the major post war measures of the Government to tackle the problems arising from the dispersal and resettlement in civil life of the large body of returning Services men and discharged war workers. The Service came into being in July 1945, and is still in its infancy. During this period of trial, it has had to contend with a vast mass of prejudice and has had to shoulder very heavy responsibilities. It was only natural that the Employment Service, simply because it offered a free and impartial service was viewed with utter hostility by the profit making middlemen who have been the agents for practically all industrial recruitment. It was also natural that, being a new experiment, it was critically and even suspiciously looked upon by employers. The employment-seekers were sceptical about its effectiveness, and the public indifferent. To add to these difficulties, the Service came into existence at a time when demobilisation was proceeding at a fast pace and the employment field was rapidly shrinking. Just when the Service was settling down to discharge the heavy responsibilities entrusted to it it was called upon to shoulder the additional task of resettling the vast numbers of displaced persons from Pakistan—a task which would have severely tried all the resources of any well-established institution. Despite these heavy odds, the Employment Service has made good progress and has demonstrated that it is not only an integral part of any planned economy but a sheet anchor in times of national crisis.

Growth in Popularity of Employment Exchanges

Since its inception, the Exchanges have registered a total of 31,88,394 employment seekers including 5,01,562 displaced persons. Of these 7,91,259 have been placed in employment and 25,791 given free Vocational and Technical Training. The fact that the highest number of employers who used the Exchange Organisation during any one month has increased from 3182 in undivided India in 1946 to 5,274 in 1949 illustrates the growing popularity of the Service among employers. At the same time there has been a 100% increase in the monthly registration applicants for employment assistance which shows that employment seekers are naturally turning to the Exchanges as the nation's employment finding agency.

Technical and Vocational Training

Today, the Employment Service which was originally set up for a limited purpose, is truly national in character—it

has been thrown open to all categories of employment seekers. Not only have the Union and State Government recognised the Employment Service as the agency for recruitment of workers but leading employers and trade union leaders have expressed their appreciation of the Service. At present there are 55 Employment Exchanges and 55 District Employment Offices functioning in addition to a Central Clearing House located at the Headquarters of the Directorate-General of Resettlement and Employment for the purpose of encouraging the necessary mobility of labour from one region to another. The Organisation also provides Technical and Vocational training at Training Centres set up in various States. The Training Centres have a total capacity of 10,000 seats of which about 7,000 are in engineering and building trades. The object of the Training Scheme is to equip applicants with the skill necessary to increase their employability and to ensure a steady flow of skilled workers to the country's industry.

Effective Working of Exchanges

The main reasons why the Employment Exchanges have been able to render effective service in times of difficulty and in meeting the day-to-day demands of employers and workers are (1) its scientific method of maintaining records of vacancies and employment-seekers which facilitates selection from a wide field and accurate matching up of applicants against vacancies, and (2) the adaptability of the internal organisation of the Exchanges to suit the needs of the local employment market.

Specialised Departments

The internal organisation of an Employment Exchange is designed to suit the employment needs of the employers and workers of the area within which it operates. Generally speaking the internal division of labour within an Exchange is on broad occupational basis but in bigger offices where the volume of demand for assistance from workers and employers in a particular industry is sufficiently large and well-defined, specialised sections dealing with the particular industry have been set up. For example, at the Regional Employment Exchange Bombay, a special section exists which registers textile workers and receives demands for them. The Regional Employment Exchange, Kanpur, has opened special sub-offices to deal with the day-to-day demands for textile workers.

Another important reason for the success so far achieved by the Employment Service has been the close association of the chief participants in industry, namely employers and workers, with the Employment Service. It would have been impossible for a voluntary service like the Employment Exchange Organisation, which places no compulsion on the part of employers to notify their vacancies to the Employment Exchanges nor compels employment seekers to register themselves at the Exchanges, to discharge its functions without the co-operation and the goodwill of both employers and workers.

Advisory Committees

Machinery for securing the co-operation of employers and workers has been provided in the form of advisory committees which have been set up at different levels of employment service operation. The advisory committees, Central, Regional and Sub Regional, have done very useful work inasmuch as they have not only helped to popularise the Service but have helped in the formulation of national policies governing the Employment Service and also in overcoming the problems which confronted the Organisation in its infancy.

While the advisory committees are indispensable to the proper functioning of the Employment Service, their object in the main has been to assist and secure a smooth and effective operation of Employment Service as a whole and to advise on any question of importance in the entire local employment scene. There is, however, need for closer collaboration between the Employment Service and management and labour on an industry basis so that the problems of labour supply and effective utilisation of the existing

labour in particular industries might be jointly solved. While one of the essential duties of all Employment Officers is to maintain close contact with employers and workers in the particular industries and undertakings in the Local Office area, there is need for this collaboration being brought on a more systematic and formal basis. This would enable the Employment Service to effectively tackle the problems of particular industries and undertakings and to play a truly constructive role in the employment market. The scheme for the recruitment of industrial workers through the Employment Exchanges and decasualisation of labour sanctioned by the Uttar Pradesh Government is a beginning made in this direction.

Vital Role of Employment Service

The Employment Service stands on the threshold of a new and difficult period. The country is passing through a period of economic crisis. The fear of slump in industry and consequent hesitancy on the part of industrialists to invest, the closure of existing mills and the insistent demand for severe economies in Government departments have resulted in the inevitable reduction of employment opportunities and in increase in unemployment. It is in circumstances such as these, more than in any others, that it becomes vitally important that the manpower resources be utilised and that all available employment opportunities be distributed to the best advantage of the country. In this, as well as in any plan that the country may adopt to meet the situation, the Employment Service will have a vital role to play. Given the necessary co-operation, the Employment Service will prove itself an invaluable instrument for the promotion of the country's industrial well being.

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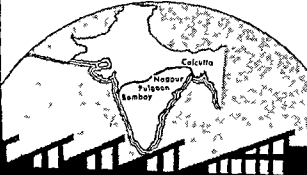

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THE TRADE MARKS REGISTRY— Its Benefits to the Textile Industry

By K. S. SHAVAKSHA,
Registrar of Trade Marks Bombay

THE Trade Marks Act was passed in 1940, but the main provisions of the Act did not come into operation till 1942. At that time there were in effect two Registries in India, one in Calcutta attached to the Patent Office, and the other at Bombay, which was restricted to trade marks in respect of textile goods. It was soon found that such an arrangement was impracticable, and in 1943 the Trade Marks Act was amended so as to establish one Registry in India. The head office of the Registry has since been established at Bombay, but a branch of the office still functions in Calcutta.

Trade Marks Legislation

The nature of the work under the Trade Marks Act is such that unless there is one office throughout India it would be impossible to ensure uniformity of practice and lack of conflict of registered trade marks. About the year 1945 certain Indian States passed Trade Marks Acts similar to the one in India and other States contemplated doing so. The difficulty of the situation was immediately realised by the commercial community. As there were 400 odd States in India, there was nothing in theory to prevent each State from passing a Trade Marks Act and demanding registration in that territory. Although from the practical point of view all Indian States would not have passed such legislation, yet it was appreciated that at least 20 major States would possibly do so. In order to overcome this difficulty, reciprocal arrangements were arrived at between those States which had passed trade marks legislation and what was then British India. The effect of this arrangement and the consequent legislation was that for all practical purposes British India and the Indian States were considered one unit and registration in any Registry became effective throughout British India and the Indian States. This arrangement has had the effect of preserving the interests of the commercial community in their trade marks.

Jurisdiction of Trade Marks Act, 1940

On the 1st April 1950, the Trade Marks Act was extended to the whole of India except Jammu and Kashmir. It will be appreciated that the position with regard to trade marks in India would have been extremely difficult if reciprocal arrangements had not been arrived at with the Indian States.

The Act in Working

There can be little doubt that the Trade Marks Act of 1940 has been wholeheartedly supported by the commercial community. Nearly 1,50,000 applications have already been made. In the nature of things there has been delay in adjudicating upon the rights of the applicants, but the Trade Marks Registry has now reached a stage when it can issue its first order almost within two months of the receipt of the application. From 1942 onwards a number of cases have been heard by the Registrar and the Deputy Registrar. From some of their decisions appeals have been taken to the High Courts and it is a matter of gratification to note that so far not a single appeal has succeeded.

Impartial Standards

Apart from the fact that the Registrar has to apply the law, it is the duty of the Trade Mark Registry to see that all applicants are treated alike. In course of time, practice in reference to many matters crystallizes and in order that there should be no doubt as to the practice, it should be inflexible. It is the duty of the Registrar to feel the pulse of the commercial community and of commerce. The various kinds of commercial practices which prevail in India have to be taken into account and no trade mark should be registered which would have the effect of embarrassing other traders or of confusing the public.

The Registry at Work

The work in the Trade Marks Registry has to be done methodically and this involves considerable labour. Each application including the trade mark has to be indexed in various ways. There are the nominal index, the word index, the terminological index, the index of devices and other indexes. Unless such indexes are prepared, it would be impossible to examine each application properly, and unless the examination report is correct, it would be impossible for the Registrar to pass accurate orders. In the first instance all matters relating to an application are expressed in correspondence and this involves heavy clerical work. Ordinarily, over 12,000 letters are received in and despatched from the Trade Marks Registry at Bombay every month. The applicants are entitled to be heard personally and many hearings take place not only as between the applicants and the Registrar but also as between the applicants and the opponents. From all decisions of the Registrar appeal lies to a High Court.

Matters of great importance have arisen for decision and in recent times perhaps the most interesting set of cases is that relating to enemy trade marks.

As far as India is concerned, it is of interest to note that the highest number of applications comes from the Textile Industry. The second industry to take pride of place in the number of trade marks applied for is the pharmaceutical industry. Another industry from which a large number of applications comes is the bee-di industry. As India proceeds

to be more and more industrialised, greater will be the demand for registering trade marks. It is a common failing of merchants to hit upon a trade mark and then immediately begin to use it and thereafter to apply for registration for the same. Although they may have adopted the trade mark in all honesty, it very often happens that it conflicts with a registered trade mark and therefore the conflicting trade mark cannot be registered. This often leads to hardship, for in the meanwhile the merchants would have spent perhaps a large sum of money in advertising the mark and in printing labels and doing other things in reference to the mark. All such exertions and expenditure are wasted if the mark conflicts with a registered mark. It is, therefore, advisable for the merchants to make use of the Trade Marks Registry for the purpose of finding out whether the mark proposed to be used by them is registrable.

No doubt there has been considerable confusion in the past with reference to trade marks merely because there was no proper system of registration of trade marks. But now that the Trade Marks Act has been functioning for some years, there can be no excuse for any merchant to adopt a trade mark which is likely to infringe another merchant's trade mark or which is likely to cause confusion amongst the public. Every endeavour is made by the staff of the Trade Marks Registry to assist the public in solving their difficulties, and merchants should have no hesitation in approaching the Trade Marks Registry for guidance.



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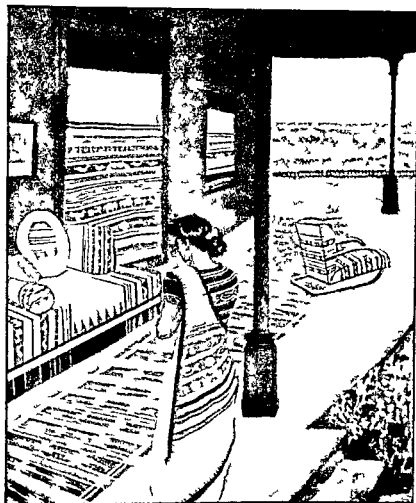
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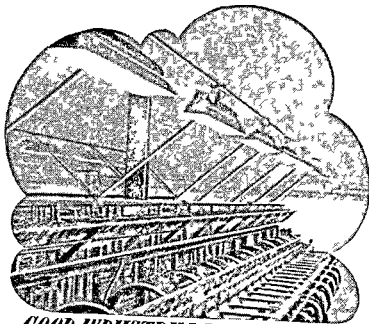


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COTTON IMPROVEMENT WORK IN INDIA DURING THE PAST 25 YEARS

By **SARDAR DATAR SINGH**,
Vice Chairman
Indian Council of Agricultural Research

COTTON occupies an important place in the agricultural as well as the industrial economy of India. In the early twenties the indigenous production of cotton was not only adequate for meeting a major portion of the requirements of the local Textile industry, but it also provided a substantial surplus for export. The following figures depict the cotton position of the country in 1923-24 —

Year	Acreage	Production	Consumption of Indian cotton in India in mills.	Consumption of all kinds of cotton in India in mills	Exports of Indian cotton.
	000 a acres.	000 a bales	000 a bales	000 a bales.	000 a bales.
1923-24	28 901	6 088	1 836	1 918	3 764

The improvement of the quality of the crop was the most urgent need of that time. The Provincial Departments of Agriculture, which had started the work of cotton improvement some years earlier, had evolved a few good strains and distributed their seed to the farmers to some extent.

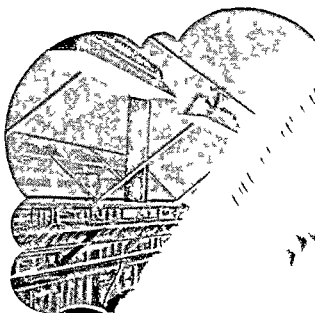
Work of the I.C.C.C.

However, it was not until the Indian Central Cotton Committee was established in 1923 that cotton improvement work was started in right earnest. The aim of the Committee from the beginning was to supplement the work of the Agricultural Departments by providing funds for research into agricultural as well as technological cotton problems of an all India importance and for development extension and marketing of improved varieties of cotton in various tracts. The Committee has so far financed about 150-160 schemes, a large number of which were for breeding high yielding superior types, some for the study and control of the important cotton pests and diseases, a few for physiological studies of the crop growth and a good number for the extension and marketing of improved varieties of cotton. The funds expended so far on these

schemes amount to about rupees 2 crores, derived either from its own source of revenue, namely the cotton cess, or from the grants made to the Committee from time to time by the Government of India.

Increased Growth of Superior Varieties

The major achievement of this improvement work is reflected in the extension of area under superior varieties. Whereas the production of cotton of staple length 7/8' and above was 1,137,000 bales in the quinquennium 1917-22, it amounted to 2,649,000 bales in the period 1942-47. The proportion of long staple cotton increased from 26% of the total production in 1917-22 to 38% in 1937-42. The corresponding proportion in 1942-47 was 67%, but this phenomenal rise was due partly to the replacement of short staple cotton by food crops under the Grow More Food Campaign and partly to real extension of the area under improved types. In 1947-48, after the partition of the country, of the 10.9 million acres under cotton in the Indian Dominion, the area covered by the improved types was 5.1 million acres or 47%. Taking a bird's eye view of the cotton crop grown in the country, one finds from the Punjab in the North down to Madras in the South, a string of improved varieties which are steadily ousting the inferior types now in cultivation. LSS and Hariana in East Punjab, Kalyan Vijay, Suyog Jariia, Jayadhar and Lavani (each one meant specially for a distinct tract in the State of Bombay), V 434 H 470 and Buri 107 in Madhya Pradesh, Malvi 9 and Indore I in Madhya Bharat, Pratap in Saurashtra, Gaorani 6, Gaorani 12 and Parbhani American in Hyderabad, MAV and Selec 69 in Mysore, and lastly the Cambodia strains Co 2, Co 3, Co 4 and Co 4/B 40 in Madras have been in popular demand for several years past in their respective areas. Had it not been for the urgent need of attaining self-sufficiency in food and the great competition arising from the price structure of the food and some of the cash crops, the cultivation of medium and long staple varieties would have extended a great deal more than it has actually done so far. Assuming that the improved varieties gave to their growers an additional return of only



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	000 a acres	000 a bales	000 a bales	000 a bales	000 a bales
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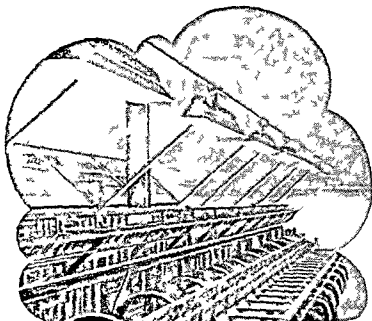
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	000 s. acres.	000 s. bales	000 s. bales	000 s. bales	000 s. bales.
1923-24	26 901	6 088	1 836	1 918	3 764

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Rs 12 per acre (in some cases it was much more), the total extra income earned by the farmers in 1947-48 amounted to Rs 616 crores. This additional income earned in one year was over three times the total expenditure incurred by the Committee during the past 26 years in India including Pakistan. The spread of the improved varieties has not only benefited the cultivators in earning additional income but has also enabled the manufacturers to secure better cotton of known qualities in bulk quantity from indigenous sources. In fact, it will be seen from the table given below that the increased production from the superior varieties has been completely taken up by the Indian mills.

Year	Production in thousand bales of 400 lbs net				Mill consumption* (Indian cotton)
	Long staple (7/8 and above)	Medium staple (below 7/8 & above 11/16)	Short staple (11/16 and below)	Total all staples	
1942-43	1,370	2,498	1,294	4,792	4,307
1943-44	1,489	2,489	1,271	5,249	4,119
1944-45	1,124	1,891	865	3,880	4,159
1945-46	892	1,736	802	3,430	3,871
1946-47	878	1,708	932	3,518	3,614
Average 1942-47	1,193	1,923	1,041	4,117	3,921

* Year ending 31st August

† Excludes Pakistan from the 15th August 1947

Average Yield per Acre

The extension of the area under improved varieties has been accompanied by a not inconsiderable rise in the yield per acre. Notwithstanding this progressive increase, the acre yields in India are still far from being satisfactory. They are not even half of what the American acre yields

are and as such there is still much scope for improvement in this direction. The main difficulty, however, is that most of the Indian cotton crop is grown under rain conditions, and yields, therefore, vary enormously from year to year depending upon the vagaries of the monsoon. Furthermore, the cotton crop is rarely manured during all the available manure being applied to the food crops grown independently or in rotation with cotton.

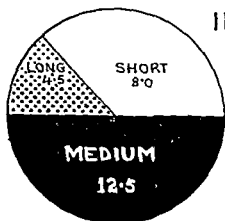
Pest Control

The research sponsored for the study of cotton pests, diseases, and the physiological investigations pertaining to the behaviour of the cotton plant have saved cotton growers from recurring losses running into crores of rupees every year. Particular mention may be made of the efforts to control the boll worms, stem weevil, the cotton wilt and Tirak disease (defective boll opening). The annual sale to the growers in Madhya Pradesh and Bombay Kaira by the spread of wilt resistant varieties (which now cover about 17 lakhs acres) is estimated to be about Rs 68 lakhs.

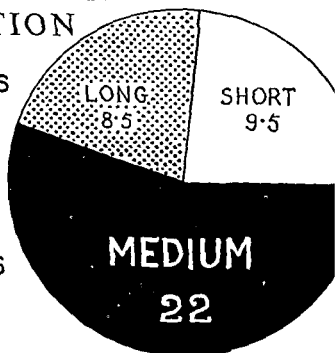
Effect of Partition on Cotton Supply Position

Since the First Great War, much effort and vast sums of money had been expended in increasing the cultivation of medium and long staple cotton in the fertile irrigated tracts of Sind and West Punjab. The production of this type of cotton increased from 114,000 bales in 1915-16 to 125,000 bales in 1946-47. Practically the whole of this valuable produce was used by the Indian textile industry. With the exclusion of Sind and West Punjab from India, when the country was partitioned in 1947, the Indian mills lost the supply of about 9 lakhs bales of long and medium staples.

INDIAN COTTON PRODUCTION



IN LAKHS OF BALES



PRESENT
2,500,000 BALES ON
11,000,000 ACRES

REQUIRED
4,000,000
17,000

cotton from this source. This has created a serious position and the attention of the Government as well as the public is now focussed on the necessity of making good the loss quickly. (The imports into India to the tune of 6 to 7 lakhs bales of long staple quality cottons from East Africa, Sudan and Egypt cannot be replaced in the near future without further intensive work and irrigational and manurial facilities but what has been proposed by the Cotton Committee and expected to be achieved within a space of two to three years, is the elimination entirely of the Pakistan cottons.)

Programme of Planned Production

To achieve this object the Indian Central Cotton Committee has submitted to the Government of India a programme of planned production of which involves the increase of area under medium and long staple varieties by about 40 million acres spread over different States, introduction of cotton as a rotation crop on the vast area of land which will be reclaimed by tractor ploughing in the cotton growing tracts of the country, replacement of short staple cottons by long and medium staple cottons especially in the irrigated tracts of East Punjab, the Union of Patiala and East Punjab States and in some heavy rainfall areas of Hyderabad State. The supply of manure on a large scale and making available of irrigational facilities have also been recommended to enhance the yield per acre and thus augment the total production. An intensive organised drive for the implementation of the plan is now under active consideration. The textile industry may well be assured that no effort will be spared to supply the major part of its requirements of raw cotton from indigenous sources.

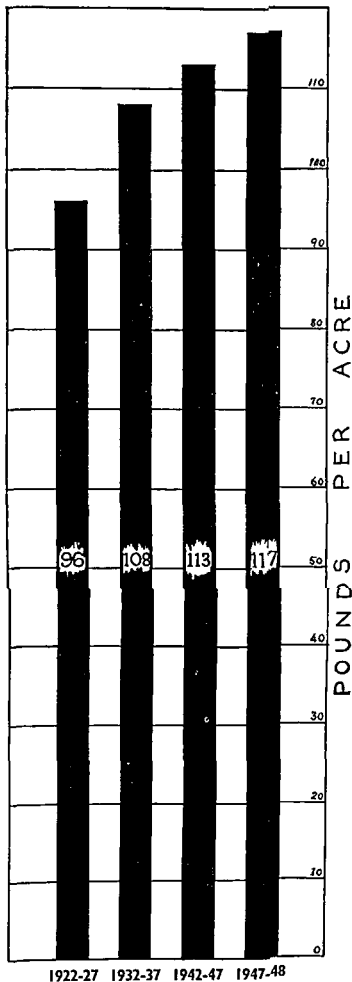
Technological Research

In addition to the evolution of improved types of cotton and the large scale expansion of their cultivation, a good deal of technological research has been conducted to assist the cotton breeders in their work of crop improvement. This work is done in the well-equipped Technological Laboratory set up in Bombay by the Indian Central Cotton Committee. This laboratory also renders service to the cotton trade by publishing results of spinning tests on standard Indian cottons and commercial types of each season.

Legislative Check on Standardisation

A good deal of attention has also been paid to the maintenance of the purity of improved cotton varieties by legislative means. The banning of the cultivation of inferior cottons such as Garrow hill cotton in Madhya Pradesh and Pulichai in Madras and the establishment of one variety for the cultivation of improved varieties in many States are instances of what has been done by legislative measures. The Cotton Ginning and Pressing Factories Act 1925, is designed to check malpractices of mixing, watering and false packing at the ginning and pressing factories.

Thus it will be evident that all the efforts made in the past are directed towards one object, namely, to try to produce pure unmixed improved quality cotton in increasingly large quantities, which would benefit both the grower and the textile manufacturer.



1922-27 1932-37 1942-47 1947-48

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	Long staple (7/8 and above)	Med. staple (below 7/8 and above 11/16)	Short staple (11/16 and below)	Total all staples	
1912-13	1,370	2,198	1,214	4,782	437
1913-14	1,459	2,409	1,711	5,579	419
1914-15	1,134	1,551	865	3,550	415
1915-16	892	1,336	807	3,035	381
1916-17	878	1,273	953	3,104	311
Average 1912-17	1,153	1,903	1,041	4,117	392

* Year ending 31st August

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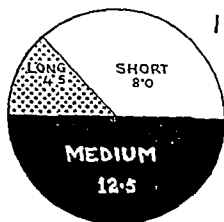
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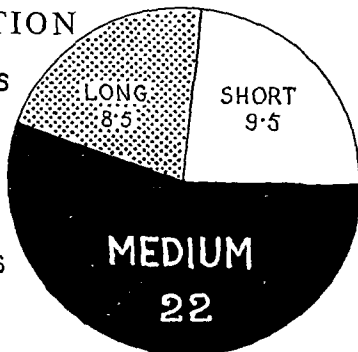
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INDIAN COTTON PRODUCTION



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COTTON

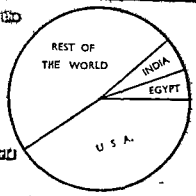
HOW MUCH COTTON INDIA PRODUCES? (Province-wise)





Each  Thousand Bales of 490 lbs

 ORISSA
 BIHAR
 MYSORE
 ASSAM
 U. P.
 RAJPUTANA
 GWALIOR
 CENTRAL INDIA STATES
 BARODA

INDIA is the

second
 largest
 cotton
 producing
 country
 in the world




 HYDERABAD
 BOMBAY
 MADRAS
 C. P. AND BERAR

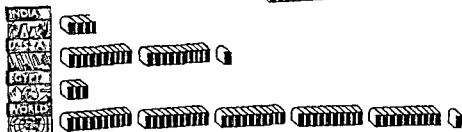
HOW MUCH COTTON INDIA CONSUMES?

Each  100,000 Bales of 490 lbs

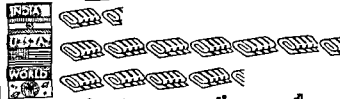
 BOMBAY ISLAND                   

HOW INDIA COMPARES WITH OTHER COUNTRIES IN PRODUCTION AND CONSUMPTION?

Each  5,000,000 Bales of 490 lbs.



Per capita consumption of cloth—Yds. Each  10 yds



(India has 21 million in which she uses about 10,000,000 of her own production into cloth and 11 million from abroad)

PLANNING OF COTTON PRODUCTION

By R. G. SARAIYA,
Vice-President, Indian Central Cotton Committee

World War II and Plan for Reduction of Cotton Acreage

THE need for planning cotton production in undivided India assumed considerable importance during World War II, as in the initial years of the War, with the loss of the Continental and Far Eastern markets for Indian Cotton, short staple cotton became a drag on the market. Simultaneously, owing to the stoppage of rice imports from Burma and other South East Asian Countries, it was felt imperative to increase food production in the Country. The question of adjusting, as far as possible, the supply of short staple cotton to probable demand and of the diversion of the area released to other crops mainly foodgrains, was considered by the Indian Central Cotton Committee at its meeting held in January 1942 and the following resolution was passed —

'In view of the necessity and urgency of avoiding any further glutting of the Indian cotton market with short and fair staple cotton hereafter, the buyers of which have been cut off from the Indian market owing to the present hostilities which may run for a period which cannot be estimated at present, the Indian Central Cotton Committee requests the Government of India to urge all Provincial Governments and States in India especially those in areas where short and fair staple cotton is being grown, to reduce the existing acreage under such cotton forthwith by at least 50 per cent. As alternative to short and fair staple cotton such other crops may be encouraged as may suit the conditions of each area preference being given to foodgrains adequate stocks and reserves of which will continue to be a matter of vital national importance for a number of years to come. To stimulate and accelerate such change Provincial Governments and States should be most effective according to local conditions in each Province and State, including the supply of free or cheap seeds and the provision of funds and facilities for the sinking of new and the repair of old wells. The Committee requests every Provincial and State Government concerned to notify the public regarding the action taken by them as early as possible—not later than 1st March next.'

Accordingly, the Provincial Governments and States, especially in areas growing short staple cotton, were addressed to reduce the area under short staple cotton forthwith by 50%. The "Grow More Food" Campaign simultaneously undertaken by Government on a countrywide scale to meet the food shortage in the country contributed to strengthen

the efforts of the Committee to reduce the area under short staple cotton. Another factor which influenced the achievement of the objective was the replacement of the Broach, Oomras and Bengals contracts by the Indian Cotton Contract with fine Jarilla 3/4" staple as the basis, which served to discourage the cultivation of short staple varieties. In fact, the target aimed at by the Committee in its resolution of January 1942 was almost realised inasmuch as the cotton area in 1942-43 showed a reduction of 4,948,000 acres as compared with the previous year, the production of short staple cotton having been curtailed by nearly 50%. At the same time, the increased consumption of cotton, particularly of medium and long staple varieties by mills in undivided India also gave a fillip to the increased production of such varieties by the diversion of area under short staple cotton to medium and long staple varieties. In the Central Provinces and Berar, a subsidy of Rs 2 per acre was paid to the grower in respect of the area under short staple cotton diverted to foodgrains. This subsidy was met from the Cotton Fund created by the Government of India early in 1942 by the levy of an additional import duty on cotton, to undertake measures to assist the growers of cotton, particularly of short staple varieties 'owing' to the loss of important export markets as a result of the War.

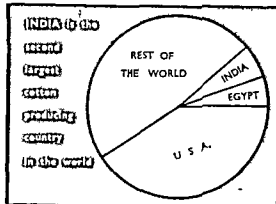
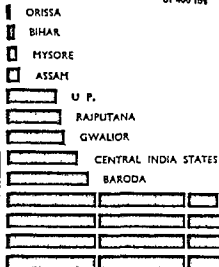
Intensification of Food Shortage and Drastic Curtailement of Cotton Acreage

In January 1943, the Indian Central Cotton Committee recommended the formation of Crop Planning Boards, both Central and Provincial, to ensure planned production of crops on an all India basis. At the same time the Committee recommended that the acreage under cotton for the 1943-44 season should be restricted so as not to exceed the acreage in the 1942-43 season. In June 1944, the Policy Committee of the Reconstruction Committee of the Council at the Centre recommended *inter alia* the preparation of production targets for the different types of agricultural produce required by the country to meet internal as well as export demand and the establishment of a Central Crop Planning Council for the purpose. In July 1944, the Committee which considered the position arising from the large cotton


COTTON

HOW MUCH COTTON INDIA PRODUCES? (Province-wise)

Each  Thousand Bales of 400 lbs




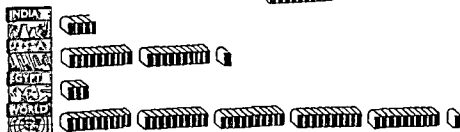
HOW MUCH COTTON INDIA CONSUMES?


Each  100 000 Bales of 400 lbs

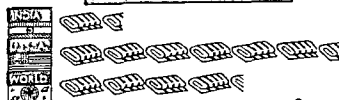


HOW INDIA COMPARES WITH OTHER COUNTRIES IN PRODUCTION AND CONSUMPTION?

Each  5 000 000 Bales of 400 lbs



Per capita consumption of cloth—Yds Each  10 yds



(The 21 million in which the yarn is spun is about 10,000,000 spindles power.)

crop in 1943-44 and the accumulation of stocks of cotton, particularly of short staple in the country, despite the reduced crop in 1942-43 and the increased mill consumption, appointed a Cotton Planning Sub-Committee to examine the part which cotton should play in the planning of agricultural production and to work in close collaboration with the proposed Central Crop Planning Council. The Sub-Committee met in November 1944 and recommended *inter alia* that for the 1945-46 cotton season (a) the 1942-43 all India cotton area of 19.2 million acres should be reduced by 3.1 million acres, thus providing for a maximum cotton area of 16.1 million acres and (b) of the total reduction of 3.1 million acres, 2.0 million acres should be from areas under short staple cottons and 1.1 million acres from areas under low grade medium staple cottons. The extent of the reduction required to be made under each variety was also specified by the Sub-Committee. The recommendations of the Sub-Committee which were recommended to the Provincial and State Governments were endorsed by the full Committee at its meeting in January 1945. Meanwhile as a result of the promulgation and enforcement of the Bombay Growth of Food Crops Act, and the action taken by the Provincial Governments in connection with the Grow More Food Campaign, the all India cotton area in 1944-45 was reduced to 14.8 million acres and in 1945-46 it stood at 14.7 million acres being 9.9 million acres or 43% less than the acreage in the triennium ending 1938-39. During the same period, the area under food crops increased by 25.8 million acres and that under oilseeds by 1.2 million acres. It may be stated here that during the war, the policy regarding food production did not conflict with the cotton policy, in fact, the two policies were complementary.

Post-War Need for Re-orientation of Cotton Policy

With the cessation of hostilities, the Indian Central Cotton Committee felt that a re-orientation of the cotton policy was called for, but it did not press for it having regard to the difficult food position in the country. Accordingly, in February 1946 the Committee expressed the opinion that, although from the purely cotton stand point, an extension of the cotton acreage was highly desirable, in view of the gravity of the food situation in the country, the Government of India should be requested to address all Provincial Governments and States to take whatever steps were necessary to restrict the cotton acreage for the 1946-47 season so that it might not exceed the acreage sown in 1945-46. In making the recommendation the Committee was aware that the maximum acreage suggested was below India's domestic requirements for raw cotton and cotton seed for cattle feed. At the same time, the Committee urged that every avenue should be explored to increase the yield per acre of cotton. The actual acreage in 1946-47 turned out to be only slightly higher than that in 1945-46.

The question of the acreage that should be planted with cotton during the 1947-48 season was examined by the Committee at its meeting held on the 31st January and 1st February 1947. After extended discussion it was unanimously decided that, provided the food position permits it, the Committee should press for an increase in cotton acreage in the 1947-48 season, especially in view of the serious shortage of cotton seed in the country. In this connection, a delegation from the Committee led by the writer waited on Dr Rajendra Prasad, then the Hon ble

Member for Food and Agriculture, in April 1947, at New Delhi and placed before him the views of the Committee. As a result, the Government of India urged upon the Provincial Governments the necessity of not enforcing rigorously their schemes for reducing the area under cotton and of releasing a portion of the land diverted from cotton to be reverted to cotton. The actual acreage in 1947-48, however, was slightly less than that of the previous season owing to the price policy.

Post-Partition Planning to overcome Deficit in Cotton Supplies in Indian Union

The partition of the country into the Indian Union and Pakistan from the 15th August 1947, resulted in the assignment of the fertile and irrigated areas of Sind and the West Punjab to Pakistan. The area under cotton in the Indian Union in 1946-47 was 11.7 million acres and the actual crop about 25.5 lakhs bales. The Indian Union accounted for about four fifths of the total cotton production of undivided India in 1946-47. Again the production of medium and long staple cotton in the Union represented some 45% of that in undivided India. On the other hand, the Indian Union accounted for 98% of the total mill consumption of all cotton (39.4 lakhs bales) in undivided India in 1946-47. The whole question of planning cotton production *vis-à-vis* the partition of the country was examined by the Committee in March 1948. The Committee recommended *inter alia* that as compared with the 1946-47 season, the area under cotton in 1948-49 should be increased by 4.0 million acres under long and medium staple varieties. The target cotton acreage for 1948-49 was thus proposed to be 15.7 millions against 11.9 millions in the pre-war year 1938-39. This plan as submitted to the Government of India also involves (i) the replacement of short staple cotton by medium and long staple varieties in the irrigated cotton tracts of the East Punjab and Patiala and East Punjab States Union and in some of the heavy rainfall areas of the Hyderabad State, (ii) the increase of the yield per acre, particularly of irrigated cotton, by the greater use of fertilisers, and (iii) the provision of greater irrigation facilities through minor irrigation works for the growing of good quality cottons. No action was taken by the Government of India to give effect to this plan as a whole, in view of the repercussions the proposed increase in cotton acreage might have on the acreage under food crops. The Committee at its meeting held in February 1949, after a review of the statistical position of cotton, again stressed the need for going ahead with the plan for increasing the cotton acreage by 4.0 million acres. The need for fixing remunerative prices, particularly for medium and long staple cottons with a view to giving an incentive to the increased production of such cottons was also emphasized as will be seen from the following resolution on the cotton policy of the Government of India passed by the Committee at the same meeting —

This meeting of the Indian Central Cotton Committee expresses its concern at the cotton policy adopted by the Government of India. Besides fixing lower prices for all cottons the differentials allowed by them for medium and long staple varieties are such as would result in nullifying the many years work of this Committee for improving the class and staple of different cottons.

While the Indian Central Cotton Committee fully appreciates the need for increasing the production of food crops it strongly feels that the need for increasing the production of cotton in the Indian Dominion is equally great.

The Committee therefore strongly recommends that the Government of India should carefully consider the problem of increasing the production of cotton by diverting as much acreage to cotton as possible and also revise the floors ceilings and the differentials to such a level as would induce the cultivators to extend the growing of improved varieties

Need for Integrated Planning of Cotton and Food Production

At the meeting of the Indian Central Cotton Committee held in December 1948, the following resolution on the question of the place of cotton in India's economy in the context of the partition of the country and other factors was passed which was subsequently forwarded to the Government of India —

That this meeting of the Indian Central Cotton Committee expresses its grave concern at the increasing dependence of the Indian textile industry on foreign supplies of cotton and strongly urges the Government of India to appoint a Special Committee representing all the various interests concerned to consider exhaustively the whole question of the place of cotton in India's economy in the context of the partition of India and other factors and make recommendations on the subject at a very early date

The intention was that the Special Committee proposed in the resolution should examine the whole question comprehensively and speedily and make recommendations for a dynamic cotton policy both in its short and long term aspects, with due regard to the seemingly conflicting claims of other crops

Latest Plans for Increasing Cotton Production

The Indian Central Cotton Committee at its meeting in October 1949 considered carefully the extremely serious cotton position arising from (a) the diversion of acreage from cotton to other crops, mainly food and groundnut (b) the partition of the country, and (c) the devaluation of the currency accompanied by the high increase in the rupee price of foreign cotton. The Committee passed a resolution expressing the view that India should be self supporting in supplies of cotton of staple length upto 1' in as short a period as possible and that for this purpose, the present annual production of roughly three million bales should be increased by about one million bales. The Committee also suggested how the increased production should be distributed between the different Provinces and States*. The Committee further recommended that every attempt should be made to increase the production by increasing the yield per acre and utilising fallow lands for cotton, wherever possible. Realising the difficult food position of the country, the Committee suggested that only the minimum acreage should be diverted from food grains to cotton, if necessary, subject to the condition that, where such diversion is inevitable, the Central Government should guarantee to make good to the Provincial and State Governments the shortfall in foodgrains. The Committee also stressed that the Government of India should give the same high priority to the growing of more cotton as to the growing of more food, and should make available the required staff and funds to increase production *inter alia* by such aids as fertilisers, improved seed, and

implements, including power implements priority of transport, irrigation facilities, etc. The Committee further suggested that in order to make cotton growing more attractive to the grower, the price of groundnut (the most serious competing crop) should be controlled in the same manner as that of cotton

Arising out of the above resolution, a plan for increased production of certain urgently needed varieties of cotton to the extent of five lakhs bales during 1950-51 was considered at a Conference of Provincial Agricultural Ministers and representatives of the cotton industry the trade and the Indian Central Cotton Committee in November 1949. According to the plan, which was generally approved by the Conference, the expected increased production is intended to be achieved in two stages,—by extension of acreage, use of fertilisers, adoption of mixed cropping of cotton with groundnut and use of improved seed

Objective of a Sound Cotton Policy

A sound cotton policy for India should aim at producing sufficient cotton to meet internal requirements as well as to cater for a minimum export demand for short staple cotton. The short term objective should be limited to making India self sufficient in regard to supplies of cotton of staple length upto 1' required by the Indian mill industry. Imports from Egypt, East Africa Sudan, etc. of longer staple would, however, have to be continued for some years to come, until suitable strains are available for cultivation on a large scale as a result of the research work initiated in Madras Province, Mysore State and East Punjab. On the basis of 34 lakhs bales for mill requirements, 27 lakhs bales for extra factory consumption and 3 lakhs bales for export, the annual cotton production target should be 40 lakhs bales. This would require between 13 and 20 million acres, on the basis of the highest (120 lbs) and lowest (78 lbs) average yield of lint per acre. Taking a normal yield (100 lbs per acre), the area required would be of the order of 157 million acres against the present acreage of 11 millions and the 1938-39 acreage of 199 millions for the Indian Union alone. The extent of increase in acreage required could be substantially reduced if simultaneously steps are taken to raise the yield per acre by manuring, supplying improved seed and adopting certain simple agronomic practices within easy reach of the cultivator. It may, however, be stressed that for the success of any cotton plan, it is most essential that remunerative prices for cotton should be ensured to the cultivator, particularly in relation to other competing crops. In this connection, it may be mentioned that as compared with the pre war year, while the prices of foodgrains and oil seeds have risen to nearly $4\frac{1}{2}$ and 5 times respectively, cotton prices are only 28 times the pre war level. This clearly shows that cotton has become a much less attractive crop than other competing crops. If cotton production is to be increased in India to the extent desired it is inevitable that there should be a more equitable adjustment of the relative price levels of different crops in line with pre war trends so as to remedy the present unattractive position of cotton

It is realised that any plan for cotton acreage and production should be co-ordinated with and integrated in an

* Suggested increase in production as compared with 1949-50.—In lakhs of bales: Bombay Province 3.1, Central Provinces and Berar 1.9, East Punjab and Pepsu 0.8, Madras Province 2.0, United Provinces 0.9, Hyderabad State 0.7, Madhya Bharat 4.0, Bilaspur 0.2, Rajwast 0.2, Saurashtra and Kutch 0.2.—Total 10.12

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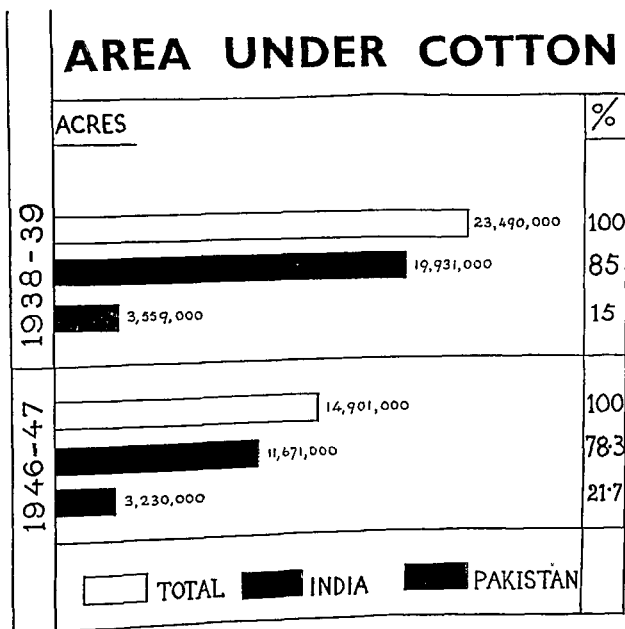
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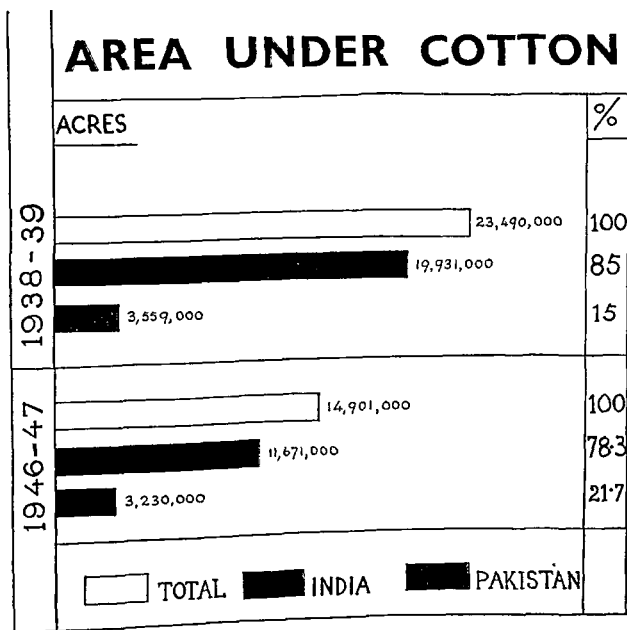
all India crop plan. Indeed this recommendation was made as early as January 1943 and repeated in 1948. It is some satisfaction to note that such a plan is being considered by the Ministry of Agriculture at present. The question of increase or decrease of acreage under cotton is not merely one of arithmetic. The relative prices of cotton and other crops come very largely into the picture as shown above. Another very important factor is that of the suitability or otherwise of the soil and climate in various parts of the country for various crops. With this is linked the vital consideration of the rotation of crops with a view to preserving the fertility of the soil. It is necessary to point out these considerations, as, at present, in the desire for self sufficiency in food in every Province, the merits of alternative crops in the interest of the country as a whole are likely to be overlooked. For example, it appears to be in the interest of the country to allow Bombay and Madras at present to produce more of the medium and long staple cottons like Vijay, Surti and Cambodias in which

the shortage is most acute and supply them with food produced in other parts of the country like the CP or Madhya Bharat. All these and no doubt many other considerations would have to be taken into account before deciding on an integrated plan of crop production in India. In the absence of adequate basic data, e.g. of a detailed survey of chemical components of the soil and of the water resources and climatic conditions in the various parts of the country and of the costs of production of various crops under different soil and climatic conditions, one is inclined to ask whether it would not be best to leave the "Planning" to the free play of economic forces acting through the reaction of supply and demand from millions of producers and consumers. Otherwise successful planning of acreage and production schedule of various crops could only be based on a detailed and careful study of the statistical, agronomic and scientific data extending over the whole country for an adequate period of time.



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COTTON RESOURCES OF INDIA

By
KALIDAS SAWHNEY, M.Sc., F.A.S.,
Secretary Indian Central Cotton Committee, Bombay

Early History of Cotton in India

COTTON has been grown in India from times immemorial. The discovery of samples of cotton materials at Mohenjo-Daro in Sind during the archaeological excavations made there during the third decade of this century established that the growing and manufacturing of cotton in the Indus Valley dated as far back as 3000 B.C. Little is known about the varieties grown in ancient times or their distribution, except that the cotton used in the manufacture of the Mohenjo-Daro samples most probably belonged to the *arborescens* type. The earliest authentic reference to cotton dates back to four hundred and fifty years before Christ, when Herodotus testified that "India had wild trees that bore fleeces as their fruit." Of these the Indians

made their clothes. Then we have the evidence of the Roman historian Pliny (A.D. 73) who, referring to the imports of cotton manufactures from India, complained that every year India was draining the Roman Empire of a hundred million sesterces, equivalent to something like 15 million rupees. In the thirteenth century Marco Polo observed that Masulipatam produced the finest and the most beautiful cottons to be found in any part of the world. Again it was India's pre-eminence in the manufacture of cotton fabrics which induced the East India Company to come to India with a Royal Charter, in search of Indian calico and muslin. In short, the history of cotton until the advent of the British in India is the history of India's leadership in the world of cotton and cotton fabrics.



WEIGHING
OF
"KAPPAAS"
(Unspun Cotton)

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**MERCHANTS
EXAMINING
QUALITIES
OF
COTTON
SAMPLES**



**King Cotton in Eighteenth and
Nineteenth Centuries**

The eighteenth century which witnessed the beginning of the consolidation of British power in India may be said to be the turning point in the cotton economy of India. This period also coincided with the Industrial Revolution in Europe. The emphasis in India began to shift from the manufacture of cotton fabrics to the production of raw cotton for supply to Britain. Various measures were taken by the East India Company from 1783 for the growing of more and better quality cotton. These efforts were continued during the nineteenth century. Exports to Britain reached their peak during 1866 following the cotton famine resulting from the American Civil War. In fact, India enjoyed a veritable boom in the raw cotton trade with Britain during the years 1862 to 1866. This boom may also be said to have laid the foundation of India's cotton textile industry as a part of the fortunes then made was invested in the starting of cotton mills in the country. Thereafter there was a setback in the exports of Indian cotton to Britain but the takings by the rest of Europe—viz. France, Germany, Italy etc. increased. Apart from this, the last quarter of the nineteenth century witnessed the beginning of a growing demand for raw cotton first from Indian mills and then from mills in Japan. As a result of this, the average annual production of cotton in undivided India (including Burma) increased from 1,583,000 bales for the quinquennium ending 1887-83 to 3,734,000 bales during the quinquennium ending 1906-07. During the same period, the average annual exports and mill consumption increased from 1,307,000 bales and 367,000 bales to 1,928,000 and 1,873,000 bales respectively.

**Position before, during and immediately
after the First World War**

The first decade of the present century witnessed a steady increase in the production, exports and mill consumption of cotton in India. Roughly half the annual crop was exported and the other half consumed in India. Exports to the United Kingdom ranged from 4 to 8 per cent of the total exports while those to Continental countries formed some 44 to 68 per cent. China and Japan accounted for 2 to 4 per cent and 21 to 37 per cent respectively of the total exports. The position relating to cotton production and trade before, during and after the First World War is indicated below—

Period	Average Annual		
	Production	* Mill consumption	Exports
1909-10 to 1913-14	4,270	2,061	2,214
1914-15 to 1917-18	4,374	2,146	2,224
1918-19 to 1922-23	4,687	2,634	2,055

* Includes foreign cotton.
Year ending 30th June

A noteworthy development during this period was the emergence of Japan as an important buyer of Indian cotton from 1909-10. Her share of the total exports of cotton from India having risen from 21 per cent in 1903-04 to nearly 50 per cent in 1917-18. This position she retained for nearly thirty years thereafter.

Position after 1922 to 1947

With the establishment of the Indian Central Cotton Committee in 1921 and its subsequent incorporation under the Indian Cotton Cess Act 1923, considerable stimulus was given not only to the improvement of the marketing



GINNED
COTTON
BEING
SERVED
TO THE
PRESS

and manufacture of cotton in India but also to the production of long and medium staple cottons. Special efforts were made to achieve a balanced production of the different varieties of cotton to meet the internal and export demand. This policy received a great fillip as a result of World War II during which short staple cotton became a drag on the market owing to the complete loss of the European and Far Eastern markets for such cotton. The position regarding the improvement of the average staple of the crop is illustrated by the following table—

Production in thousand bales of 400 lbs net.

	Long staple (6 & above)	Medium staple (8 to 11/16)	Short staple (11/16 and below)	Total All Staples
Average 1922-27	693	1 580	3 176	5 449
1942-43	1 800	2 098	1 231	4 702
1943-44	1 439	2 430	1 271	5 250
1944-45	1 131	1 681	86	3 580
1945-46	890	1 361	9	3 630
1946-47	878	1 703	930	3 513
Average 1942-47	1 153	1 923	1 041	4 117

It will be noticed that as a result of a general reduction in the cotton crop from the 1944-45 season the average crop during the quinquennium ending 1946-47 was some 25% less than the average crop during the years 1922-27. Despite this the production in 1947-47 of long and medium staple cottons was 66 and 27% higher while that of short staple was lower by 67% compared with that in 1927-27.

The annual mill consumption of Indian cotton increased from 2 072 000 bales during the quinquennium 1927-27 to 3 971 000 bales during 1947-47 the corresponding average

annual exports being 3 505 000 and 599 000 bales respectively.

YIELD OF COTTON PER ACRE
IN VARIOUS COUNTRIES



Partition and After — Effects of the Partition of Country

The partition of India on 15th August 1947, resulted in the assignment of the fertile and irrigated territories of Sind and West Punjab to Pakistan. In 1946-47, the total area under cotton in Undivided India amounted to 14,901,000 acres, of which the Indian Union and Pakistan accounted for 11,671,000 and 3,230,000 acres respectively, the corresponding figures for the pre war year 1938-39 being 23,490,000, 19,931,000 and 3,559,000 acres respectively. Out of the cotton area of Undivided India in 1946-47 and 1938-39, the tracts now included in Pakistan thus accounted for 22 and 15 per cent respectively.

The relatively higher share of Pakistan in the acreage for 1946-47 is due almost wholly to the fact that whereas the Indian Union curtailed a great deal of its cotton area, particularly of short staple varieties during the war, the Pakistan Provinces effected very little reduction. Of the area under irrigated cotton in Undivided India in 1938-39 and 1946-47, the territories now included in Pakistan accounted for about four fifths and two thirds respectively.

On the basis of the actual crop figures for 1946-47, the Indian Union accounted for 45, 62 and 76% of Undivided India's production of 9.9, 21.5 and 11.6 lakhs bales under the three staple length groups '7/8' and above', 'below 7/8' and above 11/16" and '11/16" and below' respectively. While the Indian Union's share of the total crop of 4.3 lakhs bales of Undivided India in 1946-47 was only 20.5 lakhs bales (62%), its mill consumption accounted for 39.6 lakhs bales (i.e. 98% of the total mill consumption of 39.4 lakhs bales). At the level of consumption in 1946-47, the Indian Union was dependent on Pakistan cotton to the extent of 9.8 lakhs bales (4.2 lakhs bales of staple length 7/8' and above and 5.6 lakhs bales of staple length below 7/8'

and above 11/16"') and on other foreign cotton to the extent of 7.0 lakhs bales (mostly above 1" in staple). Of the total mill consumption of all cottons, 15.1 lakhs bales were of long staple, 18.1 lakhs bales of medium staple and 5.4 lakhs bales short staple.

Post-Partition Position

Against the total production of 31.9 lakhs bales of cotton in the Indian Union in 1947-48 on an acreage of 11 millions (when seasonal conditions were exceptionally good), the internal requirements (including extra factory consumption at 27 lakhs bales) amounted to 44.8 lakhs bales, leaving a deficit of 12.9 lakhs bales. Out of the production of 10.3 lakhs bales of short staple cotton in 1947-48 the mill and extra factory consumption of such cotton accounted for 8.0 lakhs bales, leaving a surplus of 2.3 lakhs bales of short staple cotton. On the other hand, the deficit under long and medium staple cottons stood at 10.6 and 4.6 lakhs bales respectively. This deficit of 15.2 lakhs bales was met by the use of (i) 6.8 lakhs bales of Pakistan cotton (4.4 lakhs bales of long staple and 2.4 lakhs bales of medium staple), (ii) 2.2 lakhs bales of medium staple Indian Union cotton from the previous carry-over, and (iii) 6.2 lakhs bales of other foreign cotton of long staple.

The cotton supply situation became still more tight in 1948-49 owing to a short crop in that season due to unfavourable seasonal conditions and the reduced carry-over from which the deficit could be met. It will be seen from the following table showing the figures of estimated supply and distribution of cotton in the Indian Union in 1948-49, together with corresponding tentative estimates for 1949-50, that India will be faced with a very acute cotton situation during the current season —

A
TIME HONoured
METHOD
OF PUTTING
THROUGH
A COTTON
DEAL



INDIAN COTTON TEXTILE INDUSTRY—CENTENARY VOLUME

(Lakhs of bales of 400 lbs gross weight)

	1948-49	1949-50	
A. SUPPLIES			
(i) Estimated carry-over at the beginning of the season—			
(a) With mills—			
Indian cotton	11.6	8.4	
Pakistani cotton	2.1	1.6	
Other foreign cotton	0.0	2.6	
	13.7	12.6	
(b) With trade—			
Indian cotton	12.0	1.8	
Pakistani cotton	0.7	0.0	
Other foreign cotton	0.6	0.0	
	13.3	1.8	14.7
(ii) Estimated crop of Indian Union		0.0	26.3
(iii) Estimated receipts from Pakistan		3.4	
(iv) Estimated imports from other foreign countries		0.0	10.0
TOTAL SUPPLY		6.9	51.0
B. MILL CONSUMPTION			
Indian cotton	31.2	29.3	
Pakistani cotton	4.1	1.7	
Other foreign cotton	7.2	9.0	40.0
C. ESTIMATED EXTRA FACTORY CONSUMPTION		2.7	0.7
D. ESTIMATED EXPORTS		3.0	0.0
TOTAL OFFSET		48.2	44.7
I. ESTIMATED CARRY OVER AT THE END OF THE SEASON:			
(a) With mills—			
Indian cotton	8.4	1.7	
Pakistani cotton	1.6	3.6	
Other foreign cotton	2.6	0.0	
	12.6	5.3	
(b) With trade—			
Indian cotton	1.8	0.8	
Pakistani cotton	0.1	0.2	
Other foreign cotton	0.0	0.0	
	1.9	1.0	6.3

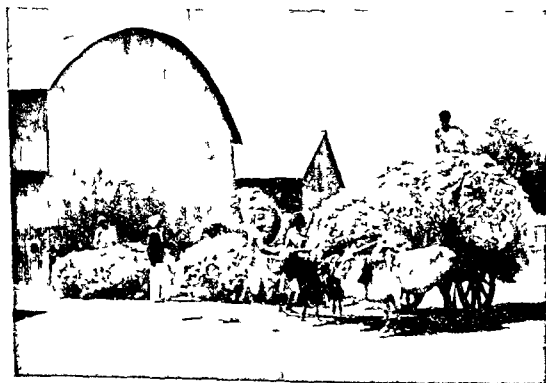
* Revised

** Imports assumed to be negligible in view of the present currency deadlock between India and Pakistan.

In the light of the above statistical position the Government of India has recently decided to permit the import of 8 lakhs bales (and if necessary 10 lakhs bales) in the current year. However, the import of such a large quantity of cotton every year without corresponding exports of cloth is not an economic proposition. The need for increasing the production of cotton in the Indian Union is therefore imperative and cannot be over-emphasized. The need is all the greater due to the devaluation of the Indian currency and consequent increase in the rupee prices of foreign cotton. From the point of view of balance of payments position also India can ill afford to spend foreign exchange for the purchase of 11 to 12 lakhs bales of cotton per annum.

Possibility of attaining Self-sufficiency in regard to Indian Union's Cotton Requirements

The Indian Union's normal annual production of cotton on the present acreage of 11 millions may be placed at 25 lakhs bales of which 45 lakhs bales may be taken as long staple, 125 lakhs bales medium staple and the rest short staple. The internal requirements of cotton may be estimated at 477 lakhs bales comprising 155 lakhs bales long staple, 199 lakhs bales medium staple and 173 lakhs bales short staple. If provision is made for a minimum export of 20 lakhs bales of short staple cotton the total requirements of cotton will stand at 447 lakhs bales. This quantity includes some 70 lakhs bales of foreign (other than Pakistani) cottons, which are mostly over 1 in staple and are imported from East Africa, Egypt, Sudan, America etc. to meet the requirements of the Indian mill industry. Cottons comparable in quality to these varieties are at present produced in India in a very limited quantity, say about 20,000 bales. Cambodia/Co 4 (staple length 1 1/16) produced in Madras Province is comparable in quality to the lower styles of East African cotton. As far as can be foreseen now production of such cotton cannot be stepped up appreciably for some time to come. The import of 6 to 7 lakhs bales of cotton from countries other



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than Pakistan will, therefore, have to be continued for some years until as a result of the experimental work now initiated in Madras Province, East Punjab, and Mysore State, suitable varieties of equally good cotton are developed for large scale cultivation in India. The dependence on Pakistan, however, can largely be avoided in the immediate future, is barring a very small quantity, Pakistan cotton can be replaced by increasing the production of similar varieties already in cultivation in the Indian Union.

Resources for replacing Cotton imported from Pakistan

For attaining the limited objective of self sufficiency in India's cotton requirements except in respect of cotton of the types imported at present from countries other than Pakistan, India should plan for producing 40 lakhs bales of cotton per annum, comprising 8.5 lakhs bales of long staple, 22.0 lakhs bales medium staple and 9.5 lakhs bales short staple compared to a normal crop on the present acreage, this calls for an increase of 4.0 lakhs bales under long staple, and 9.5 lakhs bales under medium staple and 1.5 lakhs bales under short staple. The production of 40 lakhs bales will require an acreage of about 17 millions as against the present acreage of 11 millions. That the increased production of these long and medium staple varieties to the extent required is feasible will be evident from the fact that the peak areas grown with them in recent years were 119% and 83%, respectively, higher than the corresponding areas in 1948-49. However the extension of the area under cotton should be effected only as a last resort in view of the present food position of the country. The question of increasing cotton production cannot be treated as an isolated problem. In view of the limited resources, the expansion of cotton production must form

part of a well integrated plan for the increase of production of essential agricultural commodities.

Apart from the extension of area, the chief means available for increasing the production of cotton are (i) greater use of improved seed and (ii) increasing the yield per acre of cotton by manuring, extension of irrigation facilities and adoption of improved agronomic practices. The resources available and the extent to which production can be raised under items (i) and (ii) are dealt with below —

(i) **Extension of area under improved varieties of cotton :** The additional yield that may be obtained by using improved varieties may be estimated at about 5% of the area covered by improved varieties at present is still less than half the total area under cotton. As improved varieties are already available for almost all the growing tracts, there is no reason why the entire area should not be covered by such varieties in two or three years. Thus if this is done on the existing area alone by bringing the remaining 60 million acres under improved varieties, the additional production likely to be obtained may be estimated at 60,000 bales.

(ii) **Increasing the yield per acre of cotton by manuring and extension of irrigation facilities and agronomic practices :** The total area under irrigated cotton in the Indian Union at present is about 6.6 lakhs acres. The quantity of ammonium sulphate required for manuring this area at 30 lbs. of nitrogen per acre may be estimated at 44,000 tons. The additional yield that may be obtained by manuring irrigated cotton will be about 73,300 bales. Further, ammonium sulphate can also be applied to the cotton crop in areas with assured rainfall as for example, in the Broach and Surendra tracts of Bombay, and the Karunganni tract of Madras.

CONTINUED ON PAGE SEVENTY SEVEN

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(Lakhs of bales of 400 lbs gross weight)

	1948-49		1949-50	
A. SUPPLIES				
(i) Estimated carry-over at the beginning of the season —				
(a) With mills —				
Ind an cotton	11.6		8.4	
Pakistan cotton	2.1		1.8	
Other foreign cotton	2.0		2.6	
	15.7		12.6	
(b) With traders —				
Ind an cotton	12.0*		1.8	
Pakistan cotton	0.7		0.1	
Other foreign cotton	0.6		0.2	
	1.8	29.3	2.1	14.7
(i) Estimated crop of Ind an Union		23.0		26.3
(i) Estimated receipts from Pakistan		3.4		*
(v) Estimated imports from other foreign countries		7.0		10.0
TOTAL SUPPLY		67.9		61.0
B. MILL CONSUMPTION				
Indian cotton	31.2		29.3	
Pakistan cotton	4.1		1.7	
Other foreign cotton	7	42.5	9.0	49.0
C. ESTIMATED EXTRA FACTORY CONSUMPTION				
		2		2.7
D. ESTIMATED EXPORTS				
		3.0		2.0
TOTAL OFFTAKES		48.2		44.7
E. ESTIMATED CARRY OVER AT THE END OF THE SEASON				
(a) With mills —				
Ind an cotton	8.4		1.7	
Pakistan cotton	1.6			
Other foreign cotton	2.6		2.6	
	12.6		5.3	
(b) With traders —				
Ind an cotton	1.8		0.8	
Pakistan cotton	0.1			
Other foreign cotton	0.2		0.2	
	2.1	14.7	1.0	6.3

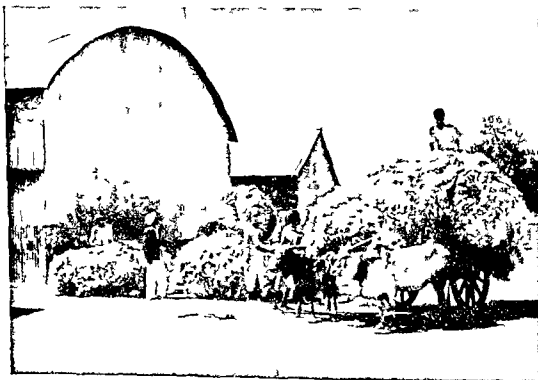
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For attaining the limited objective of self sufficiency in India's cotton requirements except in respect of cotton of the types imported at present from countries other than Pakistan India should plan for producing 40 lakhs bales of cotton per annum comprising 8.5 lakhs bales of long staple, 2.2 lakhs bales medium staple and 9.5 lakhs bales short staple. Compared to a normal crop on the present acreage this calls for an increase of 40 lakhs bales under long staple and 9.5 lakhs bales under medium staple and 1.5 lakhs bales under short staple. The production of 40 lakhs bales will require an acreage of about 17 millions as against the present acreage of 11 millions. That the increased production of these long and medium staple varieties to the extent required is feasible will be evident from the fact that the peak areas grown with them in recent years were 119% and 83% respectively higher than the corresponding areas in 1948-49. However the extension of the area under cotton should be effected only as a last resort in view of the present food position of the country. The question of increasing cotton production cannot be treated as an isolated problem. In view of the limited resources the expansion of cotton production must form

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Apart from the extension of area, the chief means available for increasing the production of cotton are (i) the greater use of improved seed and (ii) increasing the yield per acre of cotton by manuring, extension of irrigation facilities and adoption of improved agronomic practice. The resources available and the extent to which production can be raised under items (i) and (ii) are dealt with in the following—

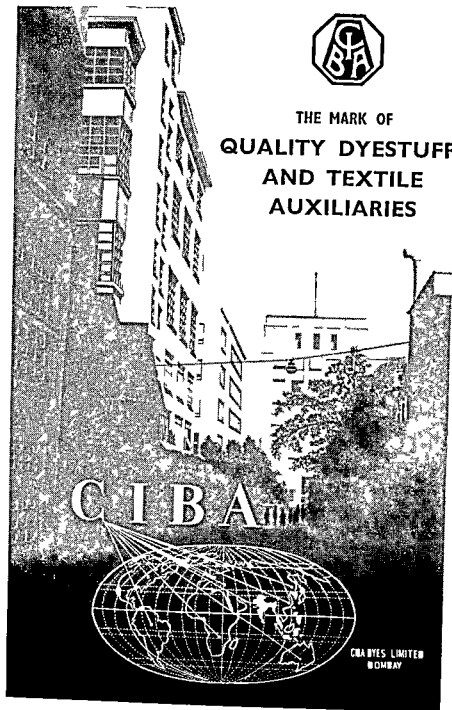
(i) **Extension of area under improved varieties of cotton.** The additional yield that may be obtained by using improved varieties may be estimated at about 5%. The area covered by improved varieties at present is slightly less than half the total area under cotton. As improved varieties are already available for almost all the cotton growing tracts there is no reason why the entire area should not be covered by such varieties in two or three years. This is done on the existing area alone by bringing the remaining 60 million acres under improved varieties. The additional production likely to be obtained may be estimated at 60,000 bales.

(ii) **Increasing the yield per acre of cotton by manuring, extension of irrigation facilities and agronomic practice.** The total area under irrigated cotton in the Indian Union at present is about 6.6 lakhs acres. The quantity of ammonium sulphate required for manuring this area at 30 lb of nitrogen per acre may be estimated at 44,000 tons. The additional yield that may be obtained by manuring irrigated cotton will be about 75,300 bales. Further ammonium sulphate can also be applied to the cotton crop in areas of assured rainfall as for example in the Broach and Surat tracts of Bombay, and the Karunganni tract of Madras.

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THE PROGRESS OF TEXTILE CHEMISTRY IN INDIA

By Dr. K. VENKATARAMAN,

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THE position occupied by cotton in our agriculture and by cotton textiles in our industry indicates the importance of research in this field. When the number and complexity of the mechanical and chemical operations involved in the conversion of the cotton fibre into a finished fabric are considered, the vastness of the scope of such research is also apparent. However, Indian investigations have so far been limited almost entirely to plant breeding experiments at one end and to work on the chemical processing of textiles at the other end, spinning, weaving and other mechanical operations of the cotton industry have received little attention by way of research. A brief survey of some problems of textile chemistry studied in the Department of Chemical Technology, University of Bombay, may be of interest to readers of this Centenary Volume.

Cellulose Changes

Moisture in cotton may be determined volumetrically by treatment with acetic anhydride in a solvent, converting the excess of acetic anhydride into acetic anhydride and acetic acid, and titrating the total acetic acid; the method has some advantages over the oven-drying and azeotropic distillation methods. A rapid procedure for determining degradation in cellulose in terms of the reducing power is to oxidize an alkaline extract with excess of ceric sulphate in sulphuric acid, and estimate the remaining ceric sulphate in the usual manner. Tests for distinguishing between hydrocellulose and oxycellulose have been submitted to fresh scrutiny, and the limits of their applicability have been defined. Oxycelluloses of a certain type, in which a secondary alcoholic group B—to an aldehyde or carboxyl group has been oxidized to a carbonyl group, couple with diazonium salts. On the basis of the reducing power, carboxyl content, metal affinity and ability to couple with diazonium salts, at least four types of oxycellulose can be distinguished and a mechanism for the modes of degradation of cellulose can be formulated.¹

Examining leuco vat dyes and ferrous hydroxide as accelerators of the oxidation of cellulose, it has been shown that the acceleration is mainly conditioned by the difference between the oxidation potential of the oxidizing agent and the reduction potential of the accelerating reducing substance. The chemical properties of the oxycelluloses show that the mechanism of accelerated oxidation is much simpler and more consistent than the mechanism of the normal slow oxidation of cellulose.² A new and elegant method for the estimation of carboxyl groups in cellulosic materials has been evolved.³ When a mixture of gaseous nitrogen peroxide and oxygen is used to oxidize cellulose an unexplored mechanism of cellulose degradation results.⁴

Studies in Bleaching

Studies in bleaching have included the use of chlorine gas for continuous desizing of grey cloth, a detailed investigation of kier boiling and bleaching of white and coloured goods, and prevention of colour bleeding during scouring.⁵ The physico-chemical behaviour of hydrogen peroxide solution and the role of stabilisers in the bleaching operation have been investigated. The influence of neutral salts on the rate of bleaching, both by sodium hypochlorite and hydrogen peroxide, has been studied. The rate of bleaching by both agents has been shown to be related to the oxidation potential. The addition of salts increases the bleaching rate and the oxidation potentials.⁶

Studies in Dyeing

The structural features of dye molecules which are substantive to cellulose have been examined.⁷ The principal forces of cellulose dye attraction are van der Waals forces and hydrogen bonding, electrostatic forces between ionized groups also operate in so far as the hydroxyl groups in cellulose have some ionic character. The primary hydroxyl groups in cellulose are mainly concerned in the attachment

of dyes, but it has to be remembered that the relative susceptibility of the primary and secondary alcoholic groups in the cellulose chain to attack by reagents varies with the nature of the reagent and the conditions of the reaction. The importance of the hydrogen bond in dyeing is indicated by the fact that all dyes contain nitrogen and/or oxygen, the availability of the unshared electrons of these atoms in amino, azo, hydroxyl, carbonyl and other groups largely determines the affinity of dyes for cellulose. The substantivity of a dye is therefore primarily related to the number and strength of the hydrogen bonds in which it can be implicated, but to enable the dye molecules to reach the sites in the cellulose structure at which they can be held, the dye has to fulfil certain requirements of shape and size.

Substantive Dyeing

There is a similarity in form in the space models of benzidine and allied groups of dyes and those of the cellulose and cellobiose units, and the substantivity of benzidine dyes has been ascribed to their existence in approximately straight line thread like form capable of attachment to the straight chains of the cellulose molecules (Meyer and Mark 1930), but all substantive dye molecules need not be elongated or thread like in the sense of the benzidine dyes. Among dyes of a given type the substantivity increases from the benzene to the naphthalene, anthracene and the more complex polynuclear aromatic systems. The older conceptions of substantive dyes must be modified in view of the substantivity of the leuco compounds of the anthraquinone vat dyes, and of the arylamides of hydroxynaphthoic acid in alkaline solution.

Azoic Dyeing

Azoic dyes are the insoluble azo dyes produced on textile fibres by impregnating them with an alkaline solution of a coupling component ('Naphthol', 'Brenthol') such as the anilide of 2-hydroxy-3-naphthoic acid and subsequently coupling with a diazonium salt. Because of the special nature of the dyeing process, a problem in azoic dyeing is the superficially precipitated pigment which has a prejudicial effect on the fastness of the shade, especially to rubbing. The factors relevant to rubbing fastness and other aspects of azoic dyes have been studied.^{1,2} Although it is practicable to produce shades of good fastness to rubbing from the less substantive Naphthols, substantivity and rubbing fastness are to some extent interrelated: it is the azoic dye derived from that portion of the naphthol which is not substantively absorbed, but mechanically retained by the yarn, which is essentially responsible for the rubbing-off effect. Soaps and synthetic detergents have a solvent action on organic substances sparingly soluble in water, owing to the paraffin chain ions collecting together in fairly large aggregates or micelles in which the organic substance forms a solution (Hartley, *Wetting and Detergency*, p. 153). While the after-treatment of azoic dyeings with soap has hitherto been regarded as a process of emulsification of the superficially precipitated azoic pigment, solubilization by the paraffin chain micelles must be assumed to be partially responsible for the action. From this point of view, naphthols containing long paraffin chains have been synthesized so that the resultant azoic dye may have increased solubility in soap solutions: colloidal character in aqueous alkali was a well marked property of these 'naphthols', the dyeings from

which were characterized by excellent fastness to rubbing. In the course of this work, Naphthol A-S-S was shown to be the 2-hydroxy-3-naphthoic derivative of 2-amino-3-methoxydibenzofuran, and numerous new 'naphthols' were synthesized in order to study the relation between their chemical constitution, substantivity and the fastness of the azoic dyes derived from them.

Mineral Dyeing

Two Indian patents cover a novel and rapid single bath method of dyeing textiles (animal and cellulosic) with mineral pigments, particularly mineral khaki.³ A new method involving the use of cuprammonium hydroxide for finishing purposes is the subject matter of another Indian patent. The results are attractive and the process is particularly useful for fabrics and yarns made completely or partially from short staple Indian cottons. Exhaustive experiments to determine the relation between the viscosity and penetration of starch pastes have been carried out. A relation between the viscosity and the stiffness of finished calico has also been established.

Studies in Fastness of Dvestuffs

There is an important aspect of textile industry in which we in India are still very backward—the fastness of the shades. Fastness demands are becoming increasingly stringent in other countries, but we continue to tolerate the use of fugitive or kucha colours, we still employ dyes such as Congo Red and Sulphur Black which have become totally obsolete in England and America. Fastness incidentally is an expression of which the full significance is not realized. There are broadly two types of fastness properties. One is fastness to processing which the dyed fibre may have to undergo before the finished fabric is marketed, thus it may be scoured, bleached, mercerized, untreated, shrunk, proofed, hot calendered. The second and from the user's point of view, more important fastness requirements are resistance to the action of light, laundrying, perspiration (which may be acidic or alkaline), rubbing and other agencies to which a textile is liable to be exposed. The standardization of fastness is an extremely complex matter, and one or two points may be mentioned in illustration. Fastness refers to a dyed textile (or other coloured substrate) and not to the dye itself. The same dye can exhibit very different fastness properties on different fibres, and even on the same fibre according to the depth of the shade and the conditions of dyeing. Indigo for instance has much better fastness on wool than it has on cotton; the anthraquinone vat dyes which have outstanding fastness on cotton are surprisingly fugitive on nylon.

Fastness to Light

Among fastness properties, fastness to light is of great importance especially in our land of bright sunshine, but we have little knowledge yet of the mechanism of fading, the products of photochemical degradation, and the photo sensitivity of dyes in relation to molecular structure. It is well known that cotton (like other fibres) gradually undergoes degradation and loss of tensile strength by exposure to atmospheric oxygen in presence of direct sunlight. This photochemical oxidation is greatly accelerated by many yellow and orange vat dyes, some of which have excellent

fastness otherwise, some indeed are themselves fast to light, but pass on the energy of light absorption to the cellulose molecule which then decomposes. Yellow and orange vat dyes for curtains must therefore be chosen with care. Fast yellow and orange dyes for cotton free from this defect are available, and dye manufacturers have mostly withdrawn the dangerous dyes from the commercial range; however, Calco Yellow 5G, an American equivalent of Cibacron Yellow R, which is the dye of choice for studying the photochemical degradation of cellulose and was withdrawn by the Ciba Company several years ago, has been recently introduced into India. Further, photochemically active dyes are still employed for calico printing because of their suitability from the printer's point of view. It is known that oxidations and reductions involving one-electron changes proceed very rapidly, and it is suggested in a paper which will shortly appear in the Proceedings of the Indian Academy of Sciences that the photochemical action of some of the anthraquinone vat dyes is related to resonance stabilization of semiquinone ions. The constitution assigned to Cibacron Yellow R by Fierz David has been shown to be erroneous.¹²

Surface-Active Compounds

Surface active compounds have become increasingly important in the textile and other industries, and a systematic study of the chemical constitution of wetting agents in relation to their properties has been made.¹³ Using sodium oleyl N-methyl taurine (Igepon T) as a model, a series of amides of the type $R'CON(R'')ArSO_3Na$ in which R' is an alkyl, R'' is H or alkyl, and Ar is an arylene residue, were synthesized, and their properties such as wetting power, resistance to hard water and protective colloidal action were studied. The structures were varied so as to determine the effect of such factors as the position of the hydrophilic group, unsaturation in the fatty acid part, molecular weight, alkyl substituents on the amido nitrogen, and the presence of substituents such as chlorine, alkyl or alkoxy groups in the arylamine. Among the wetting agents from a series of fatty acids ($C_{10}-C_{18}$), the lauric acid (C_{12}) derivatives usually had the highest wetting power. Unsaturation in the aliphatic chain led to decreased wetting power, but increased solubility. While in N-methyl group was a favourable factor, there was no advantage in increasing the size of the alkyl group. Increase in molecular weight by the use of naphthylamine sulphonic acids in place of aniline sulphonic acids led to inferior products. Compounds in which the hydrophilic sulphonate group was oriented in the *meta* position to the carboxamide group were generally superior to the *ortho* isomers, which in turn were superior to the *para* compounds. Among the compounds obtained by substitution in sodium N-lauryl and N-oleyl metanilates, the C-alkyl and C-alkoxy substituted derivatives were better wetting agents than the unsubstituted compounds. While introduction of one C-methyl group was advantageous, further methyl groups led to a decrease in wetting power. Among the numerous compounds that were synthesized and examined, lauryl p-toluidide 2 sodium sulphate possessed outstanding properties as a wetting agent. In addition to the study of the relation between the chemical constitution and properties of surface active compounds, attention was also directed to methods of evaluation of wetting agents. Thus the apparatus for carrying out the Herbig number determination of wetting power was modified. The optical methods employed for determining the

calcium soap dispersing power being unsatisfactory, a new and simple volumetric method was developed.

Some of the problems I have discussed might appear to be academic, but they are in fact of the greatest technical importance, and it is only by realizing the need for research in the basic physics and chemistry of the cotton fibre, and the mechanical and chemical processes to which it is subjected, by captains of our textile industry that the industry can prosper.

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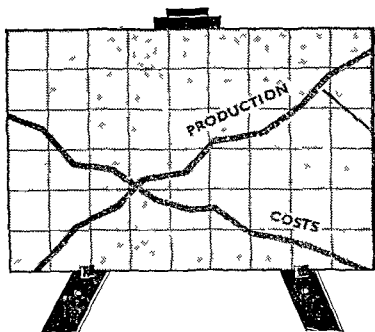
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CALTEX INDUSTRIAL LUBRICANTS

CONTINUED FROM PAGE SEVENTY ONE

For manuring 50 lakhs acres of Karunganni cotton and 50 lakhs acres of Broach-Surti cottons at 20 lbs of nitrogen per acre the total quantity of ammonium sulphate required would be 46,000 tons. The additional production that may be obtained by manuring the crop in these two tracts may be estimated at 67,000 bales. It may be mentioned that the cotton grower in India is not as yet fertiliser minded and it would be necessary to demonstrate on an extensive scale the advantages of manuring cotton with ammonium sulphate. It will also perhaps be essential to subsidise the use of fertilisers in the initial stages.

As regards irrigation facilities any appreciable extension of the area under irrigated cotton would not perhaps be possible until the major irrigation projects under contemplation or construction are completed. Meanwhile the area under irrigated cotton could be extended to some extent by the provision of minor irrigation works. In this connection it would be necessary to relax in favour of cotton the existing restrictions regarding the use of water from wells constructed with Government assistance for the production of food crops exclusively. The additional production of cotton that may be obtained by availing of the facilities from minor irrigation works may be computed at, say, 20,000 bales.

Measures for increasing the production of cotton by manuring and by extension of irrigation facilities by the provision of minor irrigation works necessarily involve large expenditure. A substantial increase in production can be attained without much additional expenditure by the adoption of the following agronomic measures —

- (a) bunding
- (b) early and proper preparation of land in summer
- (c) early sowing

(d) introducing groundnut in rotation before cotton, and

(e) inter-cropping

Experiments carried out in the State of Bombay and elsewhere have indicated that bunding can increase the yield of the cotton crop by about 5%. As regards early and proper preparation of land and early sowing it may be mentioned that in the case of monsoon crops, the early sowing increases the yield by about 10 to 15%. Similarly, trials conducted in different areas have established that introduction of groundnut in the rotation before cotton increases the yield of cotton by 10 to 15%. It is estimated that the cumulative effect of adopting the agronomic measures mentioned at items (a) to (d) above would be to raise the yield by about 25%. The adoption of these improved agronomic practices is feasible on about four million acres in the States of Bombay, Madhya Pradesh, Hyderabad and Madras. This will give an additional production of about 2 lakhs bales.

Mixed cropping of cotton with groundnut is another measure which can advantageously be adopted to raise the production of cotton, without in any way effecting the production of food crops. Even the production of groundnut itself will not be reduced to any appreciable extent if the inter crop of cotton does not form any large part of the oilseed crop. Experiments conducted in the State of Madras have shown that by sowing one or two rows of cotton after every 8 to 10 rows of groundnut, an average cotton crop can be obtained in addition to the usual production of groundnut. In the cotton growing tracts of Madras, Madhya Pradesh, Bombay, Saurashtra and Hyderabad such inter-cropping can be adopted over an area of about 15 lakhs acres. Cotton varieties suitable for cultivation in these tracts are already available. The additional yield of cotton that may be obtained by adopting inter-cropping on 15 lakhs acres of groundnut may be estimated at about 50,000 bales.

COTTON
SAMPLE
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It will be seen that a total additional production of cotton amounting to 45 lakhs bales can be expected by (i) greater use of improved seed (ii) minoring of cotton with ammonium sulphate (iii) extension of irrigation facilities by the provision of minor irrigation works and (iv) increasing the yield per acre by the adoption of improved economic practices. For producing another 105 lakhs bales to achieve the target of 40 lakhs bales, it would be necessary to extend the area under cotton by nearly 45 million acres. This increase of area can be achieved (i) by utilising fallow, culturable waste and weed infested lands (ii) by utilising a part of the additional area proposed to be brought under irrigation on the completion of the major irrigation projects under construction or contemplation and (iii) by diverting some area from other crops mainly oilseeds. Under the Government of India's scheme for bringing under the plough fallow and culturable waste and weed infested lands some 6 million acres of land are proposed to be reclaimed in 7 to 8 years. Out of this area about 5 million acres are situated in the cotton growing tracts. Roughly one third of the latter area may be expected to be put under cotton in the normal course of rotation. Further, major irrigation projects under construction or contemplation in the States of Madras, Hyderabad, East Punjab, Bombay, Rajasthan and Madhya Bharat, when completed, will add at least 4 to 5 million acres to the area of irrigated crops. Nearly 15 to 2 million

acres of this additional area may be expected to be available in due course for the growing of cotton in normal rotation. This would result in an additional production of 0.75 to 1 million bales of good quality cotton. Further, there is also scope for growing improved perennial types of cotton on waste lands not suitable for food crops, on hill slopes and in gardens. It is too early to give at this stage, an estimate of the additional production of cotton likely to be obtained from this source but the possibilities are worth closer investigation. It will thus be observed that when all the above measures are taken, India will be able not only to meet all its own cotton requirements from local resources but will also have some surplus cotton for export. This will be achieved without diverting any area from food crops to cotton.

Conclusion

It will be seen from the foregoing that from the long term aspect, India has vast resources for increasing the production of cotton of the required staples so as to make her self sufficient in all qualities other than the extra long staple Egyptians. From the short term aspect India can become independent of supplies of cotton from Pakistan in the immediate future, provided a part of the area originally diverted from cotton to food and other crops is reverted to cotton and adequate supplies of manure are made available at subsidised rates.

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AN
UP COUNTRY
COTTON
MARKET

starch in order to meet local requirements. The Government of India gave an assurance in 1940 that those industries the establishment of which was considered essential under war time conditions, and specified industries which had been promoted with the direct encouragement of Government, would not be left "high and dry" and would be protected against unfair competition in the post war period, provided they were run on sound business lines. It was in pursuance of this assurance and Government's desire to see that war time industries did not languish owing to unfair competition in the immediate post war period that the Tariff Board was constituted in November 1945. The claims to protection or assistance of the following war time industries, whose products are required by the textile industry, have been referred to the Tariff Board for investigation.

Cotton textile machinery (spinning ring frames, spinning rings, spindles and plain looms)
Wire halds
Pickers
Starch
Bobbins.
Fluted and tin rollers

Of the foregoing the Board has submitted its report on the first five, and Government's decisions thereon have been announced. I shall give in brief review the present position and future prospects of these five industries, and in so doing, I shall deal first with the four ancillaries and accessories before coming to the cotton textile machinery industry.

Starch

Until the outbreak of the last war, practically all the requirements for starch in the country were met by imports. Only two factories were then in production. But, due to severe competition from imports, they were finding it difficult to operate successfully. During the war, when imports of starch were curtailed, as many as 45 factories were started for producing starch from different starch bearing materials of which maize and wheat were the principal ones. Most of the factories could function only for short periods as supplies of maize and wheat were inadequate. Consequently, the actual production of these factories fell far short of their installed capacity. In 1943, when acute famine conditions prevailed in the country, the Government of India issued the Starch Control Order, prohibiting the production of starch from wheat and fixing the prices of different varieties of starch. The Order was amended in February 1944, so as to bring under control the production and price of maize starch. This resulted in most of the factories being shut down. At present, only a few factories are working and, these too partially, and with deteriorated maize as and when supplies are made available to them. The acute shortage of raw materials for the starch industry is likely to continue until the food position in the country improves or until adequate supplies of imported maize are made available to the starch factories. There are at present 40 factories in different parts of the country. Of these, 22 are licensed and 18 are unlicensed. It is estimated that nearly a crore of rupees have been invested in this industry.

The claim of the starch industry for protection or assistance was first referred to the interim Tariff Board in November 1945. On the recommendation of that Board, a protective duty of 18 per cent *ad valorem* was imposed on maize starch for three years ending March 1950. There was no duty on sago flour, which was imported free. Sago, tapioca and tapioca flour were subject to a revenue duty of 36 per cent *ad valorem* (standard) and 24 per cent *ad valorem* (preferential), while "farina" was subject to a revenue duty of 18 per cent *ad valorem*. The case of the indigenous starch industry for continuance of protection at an enhanced rate after 31st March 1950, came up for examination before the present Tariff Board in the latter half of 1949, when one of the units represented that the starch industry was facing severe competition from imported sago flour and that the quantum of protection already granted was inadequate owing to the fact that the cost of production had increased while the price of imported starch was falling.

The demand for starch is estimated at between 75,000 and 80,000 tons per annum, against the rated capacity in the country of about 73,000 tons. In view of the cheapness of sago flour as compared with maize starch, the consumption of sago flour by the indigenous cotton textile industry is estimated at about 75 per cent of the total consumption of sizing materials. Nearly all the 40 factories have had to close down because of lack of supplies of maize. The meagre production of maize starch was supplemented in the past by tapioca starch produced on a cottage industry scale. Manufacture of tapioca starch is understood to have been banned by the Governments of Madras and Travancore Cochin. In view of the large demand for starch in the country, the industry should be enabled to restart production by making available to it adequate quantities of maize, particularly because of the large amount of capital invested in the industry. Meanwhile, the industry has asked for imposition of a duty on sago flour on the basis of its c.i.f. price and the fair selling price of indigenous maize starch. On this basis, the duty required to be levied would work out to about Rs 75 per cwt. The Tariff Board was averse to the imposition of such a high rate of duty on sago flour required by the textile industry, especially when most of the starch factories are not in production. But the Board took the view that, since other varieties of starch were subject to an import duty, there was no reason why sago flour, now commonly used by textile mills, should be allowed to be imported free of duty. Also, the incidence of the duty on sago flour on the total cost of production of cloth was considered by the Board to be negligible. The Board, therefore, recommended the imposition of the same rate of duty on imports of sago flour as they recommended on maize starch and farina, namely, 20 per cent *ad valorem*. The Board further considered that even this 20 per cent duty on sago flour would not be adequate until the starch industry was in a position to meet a substantial portion of the country's demand. It, therefore, recommended that the duty on sago flour should be made protective and remain in force upto 31st March 1952. The operative part of the recommendations of the Board, accepted by Government, is summarised below.

- (i) Protection should be extended for a further period of two years ending March 31, 1952.

- (ii) The protective duty on starch should be raised from 18 to 20 per cent, the duty on farina should be raised from 18 to 20 per cent, its character being changed from revenue to protective, and the duty on sago flour which is at present free, should be protective at the rate of 20 per cent.
- (iii) If the price of maize varies considerably from Rs 10 per maund, the position should be reviewed to revise the quantum of protection

Wire Healds

The case of the wire healds industry was referred to the interim Tariff Board in March 1947, and the present Tariff Board submitted its report in April 1948. Before the war, wire healds required for the textile industry were imported from abroad—mostly from Japan and the United Kingdom, and to a small extent from Italy and Switzerland. By 1940, imports of wire healds from foreign countries were almost completely stopped and the scarcity of this article was acutely felt by the textile industry. A scheme for the production of wire healds was prepared by C J Textile Accessories Works, Bombay, which approached the Textile Directorate for assistance in securing the necessary raw materials. Priority was accorded to the firm for importing steel wire from the United Kingdom. The firm was also given facilities for importing tools and machinery for the factory. It started production in 1941. The capital invested

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YEARS OF SERVICE
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TEXTILE INDUSTRY



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Pickers

An application made by the Ahmedabad Picker Manufacturers Association for protection or assistance was referred to the interim Tariff Board in October 1946, and the present Board submitted its report in June 1948. Although the original application referred to pickers used in the cotton textile industry, the scope of the inquiry was subsequently enlarged by inclusion of pickers used in the jute industry also.

Manufacture of pickers in India was started as early as 1914. Available evidence shows that, at the end of the first World War, there were about 40 factories in operation, but only three were able to survive foreign competition in the years following that war and were still in operation in 1939. The outbreak of World War II in 1939, and the consequent stoppage of imports both of pickers and of the most important raw material, buffalo hide, from China and Java, gave fresh impetus to the pickers industry which expanded to meet the large and urgent requirements of the textile industry. From a few struggling firms in 1939, the number of factories producing pickers rose to about 60 at the end of 1945, when the total output increased to about 20,000 gross. The paid up capital invested in the picker industry (relating to 60 units) is estimated to be Rs 11,20,000 with about 7,000 employees. All the pickers factories, except seven, are located in the Bombay State and Saurashtra, while nearly 75 per cent of the total production is by factories situated in and around Ahmedabad. The remaining seven factories are situated in Calcutta and cater to the needs of the jute industry. Many of the pickers factories are small units, using local materials and most of them have seasonal production.

The bulk of the production of pickers in the country is of standard 4 B round foot pickers used in the cotton textile industry. Other kinds of pickers manufactured are the drop box type used in weaving pattern cloth, and in the manufacture of jute, woollen silk and rayon. The cost of raw hide constitutes more than 60 per cent of the total cost of production of the picker. Although Indian buffalo hides are available in abundant quantities, they are admittedly inferior to Batavian and Chinese hides. This is attributable to the poor method of curing adopted here. An important by-product of the pickers industry which would go to reduce the cost of production of the pickers is glue, produced from the waste cuttings of hides.

The total demand for pickers for cotton textile, jute, silk and woollen industries is 35,000 gross per annum. The rated capacity of the factories working at present is about 50,000 gross. But the actual production is less than one third of the rated capacity. The quality of the indigenous pickers leaves great room for improvement. This can be secured by greater attention to selection and grading of hides used in the manufacture of pickers, to the length of time for steeping the pickers in oil of the requisite quality, to the type of rivets used and, above all, to workmanship.

Although, on comparison of the landed cost, ex duty, of the imported picker with the fair selling price of the indigenous picker, a duty of 4 per cent was found to be sufficient. The Tariff Board recommended that the revenue duty of 10 per cent *ad valorem* should be converted into an equivalent protective duty, and that this protective duty

should remain in force upto 31st March 1951. The principal reason which weighed with the Board in making this recommendation was that a period of three years was necessary to enable the industry to stabilise itself.

The pickers industry also offers scope for development on a cottage industry basis, as is the case in various centres in the Bombay State and at Thanghad (Saurashtra). It is essential, however, that small units of production should be properly organised so as to maintain a uniform standard of quality.

Bobbins

The application for protection of the bobbin industry was referred to the interim Tariff Board in April 1947 and the present Board submitted its report in November 1948. Manufacture of bobbins in the country was undertaken on a small scale during the first world war when imports from the United Kingdom had been cut off. But soon after that war, the indigenous bobbins industry could not survive the serious foreign competition. The industry was revived during the last war when again imports were stopped and when the Indian jute mills approached a few enterprising manufacturers to start production of bobbins in the country and offered to purchase the entire output. According to the All India Jute Mill Bobbin Manufacturers Association, Calcutta, there are 21 jute mill bobbin factories in Calcutta with a capacity of about 73,500 gross of bobbins per annum. Another factory has recently been started in Bangalore with a capacity of about 2,500 gross of jute mill bobbins per annum. It is reported that Orissa and Madras have one factory each for the manufacture of jute mill bobbins, but no definite information is available. Besides, there are 112 factories producing cotton mill bobbins. Information about rated capacity and actual production is available only in respect of 47 factories. Their rated capacity is about 4,15,000 gross but actual production in 1947 was about 2,83,000 gross. The cotton mill bobbin industry is mainly concentrated in the States of Bombay and Saurashtra, with a few factories in North, Central and South India. It has been stated that at one time there were as many as 500 bobbin factories, large and small, but only a small part of this mushroomlike growth survived after the war. The capital invested in the bobbins industry is stated to be Rs 50 lakhs.

Largely started and developed during the war, many of the bobbin factories are using improvised machinery and are not equipped with modern kilns for seasoning the timber. Three varieties of indigenous timber, namely, mango, "haldū" and "kalam", are suitable for the manufacture of jute mill bobbins. After the war, i.e. since 1946, some of the factories have been using imported birch or beech so as to conform to the standard of imported bobbins which were competing with indigenous bobbins. It is the considered opinion of technical experts that indigenous "haldū" and "kalam" are quite suitable for manufacture of cotton mill bobbins, provided the timber is properly treated. There is an abundant supply of indigenous haldū and kalam from forests in Bombay and Bengal, and, with the gradual improvement of transport facilities, supplies of indigenous timber should become adequate and regular. If the bobbins industry is to have a stable foundation, it should use indigenous timber as far

as possible. Besides haldū and kalam, other indigenous types of timber considered suitable for the manufacture of bobbins are "kanju", "baurang", "white cedar", rose wood, walnut, maple, birch alder, 'bahera', and 'champ'. The manufacturers of bobbins should co-operate with the Forest Research Institute, Dehra Dun, in conducting tests regarding the suitability of different kinds of timber.

The annual demand for jute mill bobbins in the country is estimated at 75,000 gross, while that for cotton mill bobbins is put at 450,000 gross per annum. The demand for silk and rayon mill bobbins and that for woollen mill bobbins is about 5 per cent and 2 per cent respectively, of the number of bobbins required for the cotton mill industry. The domestic production of jute mill bobbins may be taken to be 50 per cent of the total consumption of jute mill bobbins in the country. In regard to cotton mill bobbins, the indigenous production was at its highest in 1947, namely, 282,648 gross, which is about two-thirds of the total consumption of cotton mill bobbins in the country. With the installation of improved machinery use of efficient tools and with a more regular supply of timber, indigenous production can be stepped up to meet the entire demand for bobbins in the country.

In regard to the quality of indigenous bobbins, the Tariff Board came to the conclusion that the right type of bobbins, both for jute mills and cotton mills, are manufactured by a number of well-equipped factories which use good timber and proper methods of manufacture. On the other hand, there are other factories which are not well equipped and which do not take proper care in selecting and seasoning the timber or in following the correct technique of manufacture. The bobbins industry is still in an early stage of development. Much work remains to be done in carrying out extensive tests on suitable varieties of timber, improvement in methods of treatment and seasoning of the timber, the use of the right type of machinery and tools, and adhering to standard specifications.

By analysing the cost of production of indigenous bobbins and by comparing it with the landed cost, without duty, of imported bobbins, the Board concluded that the industry did not require assistance by means of a protective duty. The existing revenue duty of 10 per cent *ad valorem* remains. The Board, however, recommended that, as the bobbins industry produces an essential accessory for two of the major industries in the country, namely, jute mill and cotton mill industries, Government should offer direct assistance to the bobbins industry by way of technical guidance and supervision, and facilities for the supply of the right type of timber.

Other textile accessories which are being made in India are reeds, shuttles, picking bands and roller skins, ropes and bandings and chemicals necessary for the dyeing and printing sections of the textile mills. Precise information in regard to these accessory industries is not available, and it behoves the industries to collect statistics regarding production, sales, capital and labour employed, and other particulars through the Association of Merchants and Manufacturers of Textile Stores and Machinery (India) Bombay. In this respect, Indian industrialists have much to learn from their British counterparts who, in many lines of manufactures, have produced a census of production

either voluntarily or have co-operated with the Government in producing such censuses.

A remarkable fact which was strongly emphasized during the various inquiries made by the Tariff Board, was the existence of prejudice against indigenous products even on the part of Indian industries. Undoubtedly, there are several reasons for such prejudice. Apart from conservatism, which makes us prone to purchase things which we know and which have been found to be satisfactory, there are long standing trade connections between the manufacturers of consumer goods (e.g. textiles) and manufacturers of accessories and ancillary products, which make it difficult for a change to be effected in the normal routine of stores purchase. Even after making allowance for these factors, it cannot be denied that consumers and manufacturers alike have had unfortunate experience in using Indian products, which do not always have a uniform standard and are not of the requisite quality. In several industries, particularly those which have sprung up during war time, the quality of indigenous products has been found to be below that of imported articles. This has been due to several reasons such as lack of suitable machinery, want of trained technicians or skilled labour, or unavailability of proper raw materials. But it must be pointed out that one of the principal reasons of the unsatisfactory quality of textile accessories as of other engineering and chemical products has been the tendency in our country for people to go in for production of articles which sell profitably during a period of scarcity, without adequate attention being paid to the quality of the product. A seller's market gives rise to a mushroom growth of factories producing bobbins or pickers as an odd job in which there is hardly any technical competence or even desire to maintain continuous production. Such haphazard growth has tended to bring down the quality of the Indian product and even bring a bad name to the entire industry manufacturing such accessories. Consumers of such accessories are often prepared to buy cheap and shoddy things but when offered better indigenous products at higher prices prefer to purchase foreign accessories. Indeed, the prejudice in many cases is so deep-rooted that there have been instances in which Indian accessories can be passed off by being marked as "Made in United Kingdom" or in some other country, which goes to show that the preference is not so much for intrinsic quality as for the mere name of the product. In many cases, opinion of the consumers, which after all is the final test of the quality of the product, is divided and it becomes necessary for the Tariff Board or any other investigating authority to obtain the opinions of experts who are disinterested and can give a detached view. If the manufacturers of textile accessories desire to develop their industries on a sound basis, it can be done only if they are prepared to weed out the inefficient units from their ranks and if they agree, collectively and individually, to formulate and adhere to certain specified standards. The Indian Standards Institution now offers a suitable machinery for evolving specifications for Indian products, and it is imperative for manufacturers of textile machinery and accessories to take its assistance in laying down such standards and in conforming to them.

Another striking point that has emerged from the inquiries conducted by the Tariff Board into the textile

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accessories industries such as wire healds, pickers and bobbins, is that there has not been sufficient direct contact between manufacturers of such accessories and the textile millowners. These accessories and stores are purchased through dealers and middlemen, who, in their turn, procure the cheapest type with regard to their quality. The result of this has been that the textile mills have developed a prejudice against indigenous products even though they are manufactured according to standards. The only effective way in which this prejudice can be overcome is by establishing direct contact between manufacturers of textile accessories and textile millowners by grading the factories producing the accessories, so that orders to suit individual requirements of manufacturers can be placed directly with the factories. In this matter, the initiative should be taken by the textile mills and their associations, since they are well-established and are in a position to use indigenous accessories. It is not without significance that the cotton textile industry, which has benefited so largely from the Swadeshi movement as well as from measures of protection and State assistance is itself hardly sympathetic to claims for protection to ancillary products such as bobbins, pickers and starch, or even to a basic article like textile machinery. I may recall what a previous Tariff Board observed over eighteen years ago in this connection. It stated, 'unless the policy of protection results in the development not merely of the industries to which protection is granted, but also of subsidiary industries, it will have failed to achieve its full purpose. Every effort should be made by mill owners to encourage the use of Indian materials in their mills. It is the obvious duty of millowners to provide a commensurate return to the country in the form of addi-

tional employment for Indian labour and capital'.* And the objectives of a policy of protection can best be achieved by mutual co-operation between the basic industries and secondary industries.

Cotton Textile Machinery Industry

The claim of the cotton textile machinery (ring frames, spinning rings and spindles) industry for protection or assistance was first referred to the interim Tariff Board in July 1946, and the Board submitted its report in April 1947. The Board reported that it was not possible to make a reasonable estimate of costs, because the volume of production achieved by the industry at the time of the inquiry had been very small. The Board, therefore, held that the inquiry had proved premature but suggested a fresh inquiry in 1948. The Government of India while accepting this recommendation of the Board, authorised it to hold a fresh inquiry when the industry had attained a sufficient volume of production on the basis of which the costs of production could be assessed. In June 1948, one of the units in the industry represented to Government that imports of foreign looms and parts, which it had been manufacturing, should be restricted and that the matter should be referred to the Tariff Board for investigation. The Government of India accordingly requested the Board to include within its terms of reference the question of protection to looms and parts, along with the main inquiry into the claim to protection or assistance to the cotton textile machinery (spinning rings, ring frames and spindles) industry. The present Board

* Report of the Indian Tariff Board on the Cotton Textile Industry (1932)

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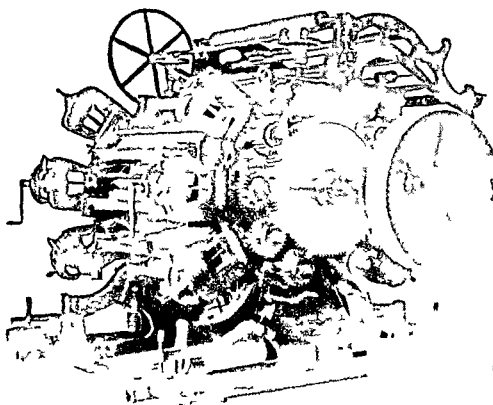


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submitted its report in October 1949, confining its investigation to (i) spinning ring frames, (ii) spinning rings, (iii) spindles, and (iv) plain looms required for cotton mills. Loom parts were excluded from the purview of the inquiry, as such parts were not normally made in the country. Similarly, bobbies, flanges and yarn beams, which were being produced occasionally, and on an experimental basis, were also excluded from the terms of reference of the Board.

The cotton textile machinery industry in the country at present can be said to comprise four factories engaged in the manufacture of spinning ring frames, rings, spindles and other spares for such frames, and five factories engaged in the production of looms. Of these, one stopped production in 1943. Another factory started the manufacture of bobbies in 1949. Besides the above nine units, two other units are reported to be manufacturing cotton mill looms, but the Tariff Board did not take these units into account as they did not submit the necessary data to the Board at the time of its investigation last year. The nine units in the industry, for which details are available, have invested approximately Rs 3 crores. Three new units which are expected to commence production of textile machinery in the next two years or so, have invested Rs 182 lakhs. The number of workers employed in the nine units at present in production is about 3,600. One of the three new units has been started in collaboration with the well known firm of Textile Machinery Makers, Ltd., of the United Kingdom, and another is associated with a firm of machine manufacturers of the United States of America.

The principal sources of imports of cotton textile machinery during the last three years were the United Kingdom, Japan the USA and Switzerland. In 1949, it was estimated that about 6,04,900 numbers of spinning machinery (in terms of spindles) were to be actually delivered in the country from foreign countries. In respect of looms, about 10,000 were imported in the three years 1946-48. Since separate statistics of imports of different categories of cotton textile machinery are not being maintained at present, it has not been possible to estimate the demand for different kinds of such machinery and the degree of competition offered by imports. In order to rectify this defect, both the interim Tariff Board and the present Board recommended that the statistics of imports of textile machinery should be maintained in detail as specified by them.

The Tariff Board in its Report (1949) estimated the demand for spindles, spinning frames and plain looms, for replacement and balancing of existing plants as well as for new mills coming under the post war expansion scheme, for the next three years, as follows —

—	Spindles	Spinning frames	Plain looms
1950	2 50 000	675	8 000
1951	3 50 000	875	8 000
1952	6 00 000	1,250	12 000

The following table shows the rated capacity, actual production in 1948, and the estimated production during the four years 1949-52, in respect of spinning ring frames and looms —

—	Rated capacity	Actual production 1948	Estimated production			
			1949	1950	1951	1952
Spinning ring frames (of 400 spindles each)	292	219	292	348	348	318
Looms	5 400	2,292	3 600	5 400	5 400	5 400

Thus a large proportion of the requirements of the country will have to be met from imports for some years to come.

The Board, after an exhaustive analysis of the costs of production of the various units and of the difficulties encountered by them in obtaining the raw materials required and in the form of prejudice against indigenous products, recommended a scheme of (a) protective duty-cum subsidy in case of spinning ring frames, and (b) protective duty in case of spinning rings, spindles and plain looms used in the cotton textile industry, and (c) import control in respect of spinning ring frames. The operative part of the recommendations of the Board, accepted and given effect to by Government, is summarised below —

- (i) The cotton textile machinery industry should be protected for a period of three years, ending March 31, 1953,
- (ii) A protective duty of 10 per cent *ad valorem* should be imposed on imports of spinning ring frames, spinning rings, spindles and plain looms used in the cotton textile industry,
- (iii) So long as this country's balance of payments position requires import control in respect of machinery, the present import control in respect of cotton spinning ring frames should be continued, and licences for imports should be issued subject to a monetary ceiling, keeping in view the indigenous demand and production,
- (iv) If and when import control is discontinued a subsidy should be granted to the manufacturers of spinning ring frames,
- (v) A review of the entire scheme of protection should be made towards the end of 1952.

The question of affording protection or assistance to the fluted and tun rollers has recently been referred to the Tariff Board which expects to hold its public inquiry into the industry towards the end of 1950.

I have already referred to the question of prejudice against indigenous products. It is true that industrialists in India have become accustomed to using imported machinery and it may take time before they get used to the idea of purchasing indigenous machinery. The prejudice is not altogether unjustified, because, in capital goods, durability and precision are far more important than in many consumer goods. Apart from quality, there arises the question of costs. And, I must emphasize that, in the present stage of our industrial evolution when the demand for capital goods is specialised and restricted, it is not possible to expand the basic industries to such an extent as to bring about a substantial reduction in the costs of production nor can the industry cater for a world market. In the absence of

specialised machine tool and machinery industries in the country, machinery manufacturers have also to produce several component parts, ancillary products, as well as jigs, fixtures and patterns in their own factories, and this factor tends to augment the costs of production. On the other hand, absence of any important component which has to be imported from abroad tends to hold up the flow of production. These "teething troubles" are inevitable and it is, no doubt, part of the risk of "venture capital" to face and overcome these and other difficulties with such support and assistance as Government can give. But the development of the textile machinery manufacture will, in the ultimate analysis, depend upon the co-operation of the users of such machinery, namely, the textile industry. The observations of the Tariff Board in 1932 quoted earlier, although they referred to manufacture and consumption of textile accessories, are equally applicable to textile machinery. The textile industry, which has grown under the aegis of State protection and developed with the fillip given by the Swadeshi movement, has reciprocal obligations not only to consumers in the country but also to its ancillary and subsidiary industries. The textile machinery manufacturers have on their part to improve the design and quality of their products, study and adopt the best technique of production, promote standardisation in their methods of manufacture. The U. K. Cotton Industry Working Party went into the question of utilising the available resources for the supply of textile machinery industry with an assured programme of sales to the home market for the coming years on which to organise their production programme. The Working Party appointed a separate Machinery Sub-Committee to go into the whole question and particularly to enquire as to whether there was a sufficiently close co-ordination between textile machinery industry and the users of machinery. The Working Party felt that there was a lack of mutual confidence between the two sides and it was unnecessary to consider which side was to blame for this state of affairs. The important point was that unsatisfactory relations existed, which was contrary to the

interests of both industries. The Working Party was of the view that there was need for bringing about "a closer form of collaboration between the British textile machinery industry and the British users of their products" and that "the juxtaposition of these two great industries should be regarded as a condition which ought to give a special opportunity to both". Subsequently, the Ministry of Supply appointed a Special Committee under the Chairmanship of Mr. Justice Evershed to investigate the textile machinery industry, and one of its findings was that the most effective means of avoiding any deterioration in the quality of British textile machinery was "the restoration of good relations between the home users and makers, the development of mutual enthusiasm". Admittedly, our textile machinery industry is not so developed, but the need for close relations and co-operation with the textile industries is not less. While the textile machinery industry should make every possible endeavour on its part to overcome the conservatism of the users and the prejudice against indigenous machinery, the textile manufacturers should extend their support to an industry whose development is a basic requirement of the country and whose growth they can actively encourage. Only by such co-operation can we have a progressive Indian textile machinery industry working in close proximity to and in collaboration with the Indian textile industry.

The manufacture of textile machinery and accessories is a branch of the mechanical engineering industry, and we have to make much headway in imparting technical training to our personnel. For this we can seek and receive technical assistance from foreign countries. But ultimately, we have to depend on our own industrial development and on our own resources, technical and human. Our country has many advantages and great potentialities. Given hard work at all levels and a new spirit of adventure, and provided we do not seek to carry out tasks beyond our physical resources, there is ample scope for development, economic and technical.

Message from

Sir Vithal N. Chandavarkar, Chairman, The Millowners' Association, Bombay.

30th May 1950.

Dear Mr. Gandhi,

I am very pleased to hear that you propose to bring out a special publication to commemorate the first 100 years of the Indian Cotton Textile Industry. You have been a keen observer of men and matters in the Textile Industry, and I have no doubt that the volume will serve as a useful book of reference to those who aspire to acquire first-hand knowledge of the Industry.

I wish you all success.

Yours sincerely,
V. N. CHANDAVARKAR.

The Editor,
Centenary Volume on
Indian Cotton Textile Industry.

COAL AND THE TEXTILE INDUSTRY

By
A. D. C. BURRIDGE.

IT is estimated that the Textile Industry consumes just over two and a quarter million tons of coal per year in its mills and associated factories which figure represents something under 8 per cent of India's present coal production.

Coal v. Oil

Over the last two decades, the inevitable controversy has been coal v. oil and, in favour of the latter commodity, it is accepted that one ton of oil fuel is equivalent to two tons of coal. This led the large group of Ahmedabad Mill owners at one stage to examine closely the question of converting their machinery to the use of liquid fuel particularly as the belief was held mistakenly that the reserves of Indian coal suitable for use in the Cotton Industry were limited. In the result it was proved conclusively that not only were the reserves of Indian coal more than sufficient but at the then existing prices the Ahmedabad Mills for instance would have had to find additional finance to the order of some Rs. 20 lakhs per year if oil fuel was used instead of coal. Since the period in question World War No. II has intervened to make the procurement of oil fuel from abroad even more difficult than before—the resources of India's neighbours contributing only a small proportion to total world availabilities.

Rise in Coal Prices

It is true that coal prices have risen considerably since the investigation noted above but this trend is common in India today. Moreover, when it is realised that approximately 70 per cent of the cost of raising a ton of coal is directly attributable to labour costs which are controlled by Government legislation, it will be evident that responsibility for the high cost of this basic material cannot be placed entirely on the shoulders of the Mineowners.

Effect of Devaluation

The devaluation of sterling has raised a further problem amongst the oil burning portions of the Textile Industry which but for the fact that machinery is usually fairly easily convertible from the use of one type of fuel to the other might conceivably cause hardship to the vast number of people employed in one of India's industries.

The location of India's main coalfields in Eastern India necessitates payment of a high rate of Railway Freight. It is pleasing to note, however, that the Government in its latest disinflation drive has proposed that Mills shall be granted a railway freight rebate at the rate of 12½ per cent on all coal supplies.

Coal Resources

Alternative sources of coal are the Central India Coal fields and the developing fields in Kharanpura which lie to the west of the Raneejunge/Jharia area and it is to these areas therefore that the Cotton Industry must look in the future for its supplies as, not only will the incidence of freight be less, but there is a move on the part of the Government of India to prohibit the use of certain types of coking coal found in the Jharia field except by the Steel Industry. While there can be no doubt that the other fields have the reserves of coal to compensate for this proposed restriction of Jharia coals, recent legislation particularly by the Bihar Provincial Government, has gone a long way towards curtailing the country's ability and willingness to produce more good quality coal.

As was natural the war years imposed a great strain on the Railways and this affected the free movement of coal. It is a matter for congratulation to that Administration however that the Coal Industry can look back on the last few years of wagon shortages as a situation that is unlikely to recur.

Control.

Another feature of the war years was the setting up of controls on distribution and prices. These controls continue today and in some respects are unwelcome as are all restrictive measures. There was, however, and for that matter still is, the need for fixed selling prices. It is well known that colliery labour is largely agricultural. Their migratory habits tended to lead them to other, and temporarily more lucrative, employment in war work on return from their agricultural pursuits. From the Government's need to produce more coal arose higher wages and allied costs in the way of foodstuffs and consumer goods which were made available to the miner and his family. This became the accepted practice and even today, four years after the end of the war, these burdens on the Coal Industry remain. To make coal prices free must therefore react immediately on the welfare of the miners whose occupation is sufficiently hazardous already.

Control over Distribution

The continuance of complete control over distribution is however another matter. The need to ensure that any essential commodity in short supply during an emergency

period reaches its right destination with speed and regularity is not disputed. When however the primary causes of the state of emergency have been removed and the reference, in the case of the Coal Industry is to labour, output and transport, it is difficult to find a good reason for the continuance of Governmental interference with the buyers' inherent right to choose his own source of supply and to obtain from that source the quality of coal best suited to his purpose, unless it is the Government's intention to introduce State Trading.

Nationalisation

State Trading is nothing more nor less than a monopoly against which the world in general has set its face. When this monopoly is exercised, as in one particular case at present, simply to bring income to the State, and in circumstances which must eventually prove to be detrimental to the Coal Industry itself, it is difficult to find any merit in the scheme. Nationalisation or State Trading or whatever name is applied to the process has yet to prove itself more efficient, more profitable or more beneficial to the welfare of a country in the running of a specialised Industry than the proved methods adopted in the course of Free Trade.

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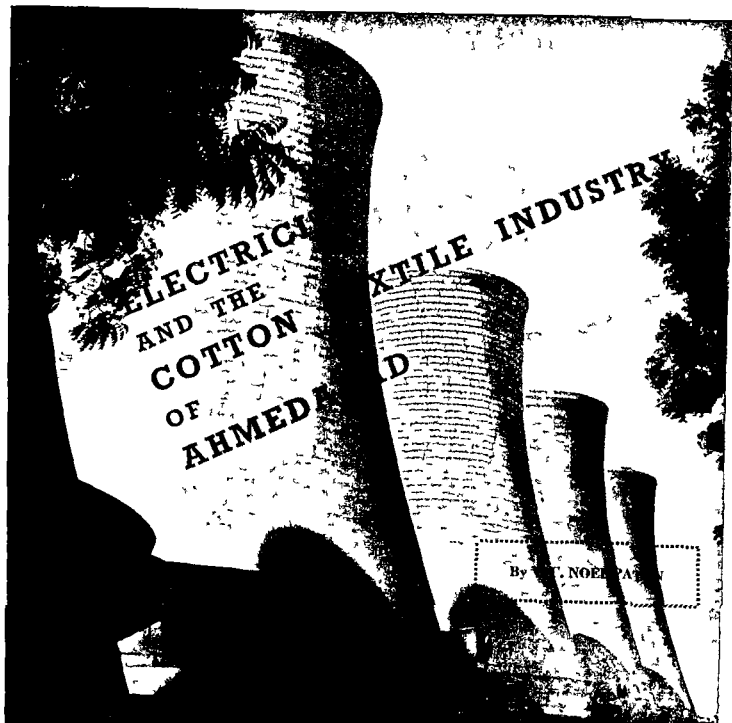
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PICTURESQUE HYPERBOLIC COOLING TOWERS AT THE AHMEDABAD ELECTRICITY COMPANY'S SABARMATI WORKS

THE Ahmedabad Electricity Company Ltd, and the Textile Industry have grown hand in hand, neither could have progressed so rapidly without the other. Their steady rise against heavy odds is way beyond the original public expectations.

The idea of starting a mill in Ahmedabad first occurred to Sheth Ranchodlal Chhotalal in 1861, the Ahmedabad Electricity Company was established in 1913. Originally people were extremely sceptical and therefore reluctant to invest in either of these ventures because, in the first place

Ahmedabad does not have a suitable climate for spinning cotton, nor is it situated in the centre of a cotton growing area, and secondly, it is not located near any coalfield nor near any source of hydro power. However following the lead given by the founder of the first Mill called the Shahpur Mills, other people became interested in this industry seeing that the goods produced by the mill were selling extremely well in India and abroad. As against 4 Mills in 1879 there were 27 in 1900, 60 in 1926, 78 in 1933, 81 in 1939 and 68 at present a few of them having

been dismantled on account of worn-out and obsolete machinery. These Mills now employ over one and a half lakhs of workers and at least 75% of the inhabitants of Ahmedabad are dependent on this industry.

Advantages of Electricity

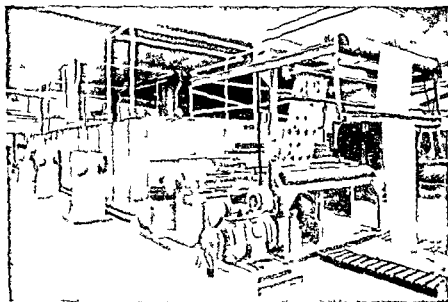
At present 58 out of the 68 mills operating or partially running in Ahmedabad take power from the Company's Supply Lines. This is not unnatural seeing that it is now accepted that the electric drive is the most efficient and supplies from a central source the most economical. The drive is silent in operation and gives constant and rapid turning movements. Electricity gives steady and efficient light and thus helps production. Electrical equipment is very economical to maintain. Ropes and massive shafting are eliminated and therefore buildings are free from vibration. With electric power it is possible to balance production by working departmentally, for instance, on holidays, if any department is required to work, it can do so without having to set the whole mill in operation.

As mentioned earlier 58 mills in Ahmedabad are connected to the Company's lines and it would certainly appear that they are appreciating the great advantages derived from it. Purchased power gives the management more time to concentrate on supervision which is so vital to efficient production. The Electricity Company assures continuity of supply, as it carries standby plant. Purchased power is therefore cheap and at the same time very reliable. The availability of coal and water for boilers is no longer a major

problem. Cleanliness is improved and power house space set free for process purposes. Because of the up-to-date and modern plant installed by the Company, coal consumption per unit of electricity generated is low, and certainly much lower than what it would have been if every mill operated its own plant so that the consumption of coal in the city per bale of cloth produced is lower than ever before.

The high efficiency of the combustion in the Company's Power House means that the Sabarmati Chimneys are practically smokeless. The result is that the pall of smoke which used to hang over the city has been very greatly reduced as the coal burned in most Mills is only that required to produce process steam.

In the light of the developments which have taken place during the last 30 years it is interesting to note that when the project was first conceived the sponsors of the Ahmedabad Electricity Company were petitioned not to desecrate the Old World City by introducing this new fangled idea. It is interesting to contrast this with today's increasing demand from mills, factories, agriculture and homes. At the commencement of the Company's operations in 1915, it generated about 2 lakhs units per annum, the daily output now is more than three times that annual figure. At present Mills alone consume 157 million units per annum. In 1934 on account of increasing power demands, a steam station, with 2—3750 KW Alternator Sets, was opened at Sabarmati. For some years the old Diesel Station at Shahpur was used as a standby and later scrapped. The building is now used as a Switchhouse and store. This



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change-over to steam was a landmark in the continued progress of the Company and the City. With the coming of steam it was possible substantially to reduce rates and because of the resulting increase in power demand plant extensions have had to be undertaken from time to time with the result that the station now has an installed capacity of 67,500 kW, with another 30,000 kW under erection and expected to come into service in the course of the next 12 months. A comprehensive load survey covering all possible potential sources including the Bombay Government's North Gujarat Grid indicates that even when the Station Capacity has reached 97,500 kW it may well fall short of the needs of the area. Consequently the Company is contemplating further extensions and to that end has already taken steps to acquire additional land. It is initially intended to install 60,000 kW under this latest project of expansion.

The Company's Power Station is the largest Steam Plant in India save for Calcutta. The property on which the station stands covers many acres of land on the bank of the river Sabarmati. The Station is connected to the B.B. & C.I. Railway System by broad gauge sidings. The plant in operation or being installed is 2—3,750 kW, 4—7,500 kW and 4—15,000 kW. Generating Sets with 17 water tube boilers having automatic chain grate stokers. Coal unloaded by wagon tippers is stocked underwater in specially designed silos and is conveyed to the boilers by means of overhead trolleys. Water is obtained from tube wells. Circulating water is cooled by a system of hyper-bolic cooling towers specially designed for the purpose of which nine are complete and one under construction. It is interesting to note that this Company was the first to employ such towers in the tropics and the bold step has been amply rewarded. The Station maintains its own test

ing laboratory. It also has a dispensary, canteen, school, library, recreation club and facilities for housing key staffs, all of which tend to promote the welfare and well being of the Company's employees.


The Ahmedabad Electricity Company has a creditable record of service to the Textile Industry to maintain and is doing so with plant extension and progressive rate reductions. During the years 1932-37 when there was a sharp slump in trade due to foreign competition particularly from Japan, and when cheap and efficient production was not possible with the old and obsolete power plants possessed by most of the Mills the Ahmedabad Electricity Company was of great assistance to the Industry. Again in the war years, a number of mills looked to the Company for help when they were threatened with an acute coal shortage. It did not take advantage of the vulnerable position of the Industry during the war but in accordance with its declared policy supplied energy to the mills at attractive rates under easy terms of agreement in spite of the fact that the Company has had to bear the high cost of machinery, stores, labour, taxation etc., incidental to extending its own plant during and after the war. Supply to the Mills would have been much cheaper today had it not been for the present greatly increased cost of plant, labour, coal and other requirements of the Company. The imposition of Electricity Duty which may be aggravated further by the intended levy of Octroi Duty by the local authorities adds to the cost of power to the consumer.

The Company is quite alive to the fact that the economic and the social well being of the City depend upon the part it can play in its progress. As it has done up to now, the Company hopes, in the years to come, to advance hand in hand with the Industry which it serves.


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PROFIT TRENDS in the TEXTILE INDUSTRY

By

M. C. MUNSHI, M.A. (Econ.) (Bom.)
Indian Institute of Science, Bangalore

The Metamorphosis

IT is somewhat difficult to describe in precise terms the tremendous change that has come over in the outlook of the general public on the Cotton Textile Industry in India during the last ten years. Before the last War, it took the pride of place as the country's first large scale industry of modern times—a premier industry, which, after weathering many a storm (despite its being the chief victim of the rulers' organized wrath in the shape of the Cotton Excise Duties) had shown the triumph of Indian enterprise and which continued to remind the world of the pristine leadership that India took as a producer of "manufactures" in centuries gone by. Besides, with the advent of the first wave of the Swadeshi movement in the beginning of the present century, it enjoyed a peculiar favour in the sentiments of the politician as well as of the average consumer. As a result of this, ever since 1927, when the question of fiscal protection came to the fore, the fact that it had been in the field for over sixty years did not prevent the industry from being treated on a par with the "infant industries" of the country.

Before the Second World War, in 1936-37, the output of the Industry was estimated at 5,072 million yards valued at Rs. 119.51 crores and the annual burden on the consumer worked out at Rs. 9.2 crores so that spread over a population of 370 millions, it gave a *per capita* burden of Rs. 4 approximately. While the industry gave to the national production about 13 times this burden¹.

The Advent of War

In a similar way, it is difficult to overemphasize how propitiously the War and its consequent boom came to the rescue of the industry in 1938-39. It has been almost forgotten how both, in the jute and cotton textile industries, the advent of the War lifted them out of a morass of troubles in which they had been sticking almost since the onslaught of the Great Depression. It is true that for the Cotton Industry 1937 and 1938 were years of comparative prosperity for that decade but by the end of 1938 such factors—as the nervousness engendered by the protracted negotiations for the Indo-British Trade Agreement, the new tax burdens like the Urban Property and Sales taxes in Bombay, the labour troubles, the uncertainty of commodity markets—reversed the trends of the two previous years. But after 1939 (to be precise from 1940)—when the industry felt the full impact of the War—there began a period of phenomenal profits and the metamorphosis, to which we have referred above, is to be accounted for by these profits as much as by the ordeal through which the consumer had had to pass during, and even after, the War. The control and rationing—invariably in a War economy—the sky rocketing prices and the added (artificial) scarcity created by existing stocks going underground, the brazen faced black marketing, the administrative failures of the Controls—even after the end of the War—the decontrol and reimpementation of controls, the rigging of the market in their favour by a few manufacturers and distributors, the sale of licences and permits and even the sales of controlling or managing powers of mill companies, the "openly secret" avoidance of taxes (and the subsequent frantic appeals by the authorities for paying these up) have served only to

¹ These estimates are taken from the Golden Jubilee Volume of the Indian Textile Journal (1941) Cotton Textile Industry and the "Consumer" by S. G. Rao.

The figure of 4 as *per capita* has to be read in relation to 9 paise *per capita* of the burden of the Salt tax which figured so prominently in our freedom struggle.

carried from the pockets of the consumers what it filled the coffers of the Government with, so that along with its share in supplying a basic requirement of Defence, it also contributed in no small measure to the Exchequer

Secondly, 1943 must be regarded as the peak year of the War taking all the six items of the table into account. We need only recall by way of explanation that it was in the middle of that year that the Government openly (and rather suddenly) accepted the fact of inflation and the need for controlling it and later in the year promulgated the Cotton Cloth and Yarn (Control) Order. It will also be noted that the ratio of net profit to capital employed is the highest during this period in 1943

Dividends also reach their high water mark in 1943. A very satisfactory feature of this War period has been that in contrast with the First World War, the industry did not squander its net earnings in the form of dividends. On the other hand, as the table of the percentages shows, the cotton mills went on building up substantial reserves. It may be observed in passing that this trend is in marked contrast with those shown by the jute and coal industries during the same period. Towards the end of the War this building up of reserves led to the adoption of a policy of capitalising them by the issue of Bonus shares and we shall have to note this feature more particularly in the years that followed the close of the War

Production and Prices

The table on Production and Prices must be read along with the phenomenal rise in the figures for sales (in value) for it will then be seen how, in spite of a stationary—and sometimes even a declining—trend in quantum of production, there is a continuous—and from 1943—a very steep rise in the sales index number. This explains the inflationary tendencies of the period, and the woeful scarcities that were so vividly dramatised in the cloth markets—the cloth famine to which we have already referred. Two things, however, need to be emphasized here. While the scarcity conditions certainly account for the rise in the prices of cloth, the net profits of the mills are explained by the wide margin left to the spinner as compared with the price of raw cotton. Between the end of 1940 and the middle of 1943 whereas the index number of prices of raw cotton advanced from 120 to 261, that for cotton manufacturers rose from 117 to 513. It has been estimated that even in August 1943 the profit margin in 20s yarn was 10s per lb., i.e. about Rs 500 per candy in terms of cotton. Is it any wonder then that under these scarcity conditions the prices of cotton yarn and cloth set up a full fledged inflationary pattern for other commodities to follow?

Students of war finance have now generally come to accept the theory that beyond a certain inflationary stage, even the 100 per cent E.P.T. ceases to exercise any anti inflationary effect. The financial conditions in India after 1943 bear ample testimony to this generalisation. Another observation that needs to be made is that a closed market—and an assured market—for any quality of the product, created such monopoly conditions that a stickler to phraseology in economics would argue that it would be doing violence to language if we described the gains during this period as profits—that we can only call them monopoly

gains. We have referred to this, however briefly, because it enables us to understand—if not appreciate—the opposition that came from various quarters of the industry to the Dividends Limitation Ordinance (in 1947) as an anti inflationary measure

Depreciation

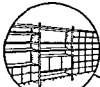
But all this story of upward trends (in the order of their magnitude) of (1) Provision for Taxation, (2) Net Profits (3) Reserves, (4) Managing Agents' Remuneration, (5) Dividends, and (6) Sales, changes its bright hues when we turn to another important aspect of mill finance—*Depreciation*. Before 1940 as the gross earnings were low, the provision for depreciation as percentages of press profits was extremely steady (more than 40 per cent). Thereafter because of the steep rise in earnings, one can understand a proportionate fall in this ratio, but after 1942, there was



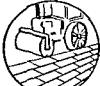
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worse is that the decisions of Tribunals appointed to adjudicate on these disputes are unrealistic and injurious to banking system

Every banking office even though branch of a bank should be considered as a separate operating unit. It is no use confusing the capacity of a branch to pay with the capacity of the whole institution. Why should a bank open a branch if it cannot stand on its own legs and meet its expenses? But when aid of law is invoked to increase expenses of an office beyond its capacity to pay then the obvious result would be that banks would decide to close down such offices. And what is perhaps still worse from the point of country's economy is that they would not venture to open new offices. The policy of the Labour Ministry in regard to employer-employee relations in banks must be fundamentally revised if banking is to develop. It is an urgent need of the country to quickly widen banking facilities so that the country's economy may develop. But this cannot happen as long as the present labour policy continues in operation against banks.

India though historically an old country is still an infant in the field of modern business methods and modern banking. We cannot afford to have experiments during our infancy which may imperil our very existence. A child has to depend upon nourishment and observance of well established principles of growth. The economic history of every country shows that in its early stages it had no impediments or hindrances of the types that are sought to be put upon our enterprises at the present moment. The best thing for India would be to eschew for the present experiments in economic democracy and allow the country to build sufficient

strength and resources. Attempts at giving new directions to social questions should only be attempted after we have reached a fairly advanced stage in our national economy. Any other course would mean delay in the fulfilment of economic ambitions and perhaps disaster in the bargain.

Planning Commission and Credit Institutions

The Planning Commission recently constituted under the Chairmanship of our Prime Minister must devote early attention to the banking and monetary organization of the country. Credit is the primary need of every economic enterprise. Unless it is geared to meet increasing demand of our proposed expanding economy there may be many disappointments leading to bickerings and frustration.

It is therefore very necessary in national interests to seek the advice and aid of the country's bankers. They are patriotic people and willing to help to their utmost extent. But their very occupation makes them conservative and cautious. They are face to face with the realities of economic life and the frailties of human nature which quickly succumb to loopholes in security and weakness in the guards. Ideas and ideals howsoever praiseworthy in theory cannot always be practicable in the field of existing conditions. A banker by temperament and training takes an objective view of questions and is therefore eminently fitted to help the country on realistic lines in its economic plans. He of course cannot be a party to wild goose schemes. He is shy and reserved and shuns publicity. But these qualities are sources of strength and add to the value of his opinion and advice. The Planning Commission must enlist his active aid.



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Cotton versus Food

THE manufacture of textiles is India's oldest and greatest industry, but it is fundamental to the economy of this country that the raw material should be an indigenous product. Yet the position in respect of raw cotton supply is rapidly deteriorating. Since 1945, India has spent 162 crores of rupees on imported cotton; estimates for the current year (1950) indicate imports on an increased scale, 45 crores of rupees have already been allocated for the import of American cotton.

The present production of raw cotton amounts to 26 lakhs bales, whereas the demand is estimated to be 47 lakhs bales. Much enthusiasm but little practical success has been achieved in the campaign for increased cotton production. To increase cotton production would be comparatively simple, if it were not for the fact that India is also deficient in food production. In 1949, India spent 150 crores of rupees on imported food, 44 crores from dollar areas. It is further estimated that due to India's expanding population, food consumption must grow annually by 400 thousand tons. It is, therefore, no longer a question whether to grow food or cotton, but a simple fact that India cannot produce a sufficiency of either.

Agrarian reform is obviously necessary, but there is little indication of a realistic plan. From time to time, enthusiasms develop over extensive irrigation projects, large scale production of fertilizers or deep ploughing. The sober view, however, will hold that there is no single remedy and no short cut to the solution of this problem. Well co-ordinated complementary reforms are needed to increase the acreage under cultivation, and to raise the production per acre, it is necessary to introduce irrigation, fertilizers, compost and chemical, forestation, deep ploughing, reform

of the land tenure system, improved seeds and enlightened husbandry. These reforms are indivisible. It has frequently been warned that, taken singly, they might bring more harm than good. Agrarian reform must, therefore, be considered as an essentially long term plan. Twenty years would not be too long for even partial realisation. Alternatively the malthusian check would inevitably adjust the population of India to its food supply, but foresight and planning must replace *laissez faire*.

Man-made Fibres : a Substitute

It is suggested that the problems confronting the textile industry should be examined in the foregoing context. Can India continue to spend enormous sums on imported food and cotton? It is patent that she cannot for many years achieve self sufficiency by exploitation of her agricultural resources. What then should be the answer? Human and animal sustenance must be derived from the soil, but in the realm of textiles, nature gives place to the laboratory—man made fibres are firmly established and are used by spinners in every known system. The prime expedient should be to produce man made fibres in India, thus to effect an annual saving of at least 40 crores of rupees. This would provide a raw material for India's greatest industry, a raw material not competitive, but complementary to indigenous cotton. It would, furthermore, introduce a new industry finding work for thousands of people contributing in large measure to the economic well being of the country.

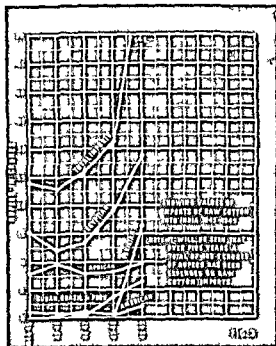
A conservative estimate would place India's net cotton deficit at 8 lakhs bales per annum. The cost of imports to replace this deficit amounts to at least 60 crores of rupees. The man made fibre most eminently suited to fill this gap

is viscose staple fibre and it would be possible to establish production units at the main textile centres capable of producing the annual requirement of 135 thousand tons. This in terms of staple fibre production amounts to 400 tons per day and twenty 20-ton production units should be established at suitable centres, each centre being allocated production units in direct ratio to its off take.

A plan is required the object being to achieve self sufficiency in textile fibres. Based upon the requirement of 400 tons per-day, twenty production units should be installed and this could be achieved in five years. The foreign currency required for implementation of such a plan would amount to little more than one year's expenditure on imported cotton. Thus over a period of five years 20 per cent of the annual expenditure on cotton devoted to the import of capital goods would render this country independent of raw fibre imports. By this means India would make a great step towards economic self sufficiency and constructive planning would take the place of temporary expedients.

Importance of Staple Fibre in World Textiles

Although this scheme would be regarded as a bold step in Indian industry it is to be emphasized that there is nothing revolutionary in the introduction of staple fibre. Viscose staple fibre is now firmly established in Europe and USA as a raw material in its own right. In Lancashire two million spindles are permanently engaged in spinning staple fibre. It is also used with great success by the Yorkshire woollen and worsted manufacturers, the jute manufacturers of Dundee and the flax spinners of Belfast. The United Kingdom consumes 130 tons of staple fibre each day and every endeavour is being made to increase production. In the USA the greatest cotton growing country in the world its rise in popularity is even more impressive from 18 thousand tons in 1938 to 118 thousand tons in 1948. Germany during World War II produced 900 tons of staple fibre per day. Her people were clothed in staple fibre and



her army wore staple fibre shirts tunics and great coats. Without this man made fibre the Allied blockade would have brought Germany to submission much earlier.

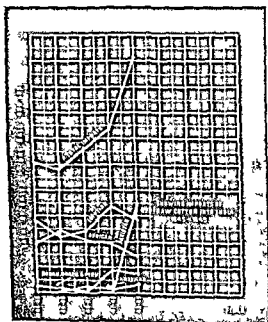
Staple fibre is now recognised as the cheapest and most versatile textile fibre available. Fabrics ranging from fine shirtings to heavy pile carpets are now made from this raw material.

Staple Fibre in India

This year India celebrates the centenary of her greatest industry. In the past hundred years India has developed the largest textile industry in the world. The time would be fitting for the inauguration of a staple fibre industry to augment the supply of natural fibres and to form an essential adjunct to the textile industry. In the manufacture and use of synthetics India is far behind Europe, USA and Japan but her ultimate needs are very much greater.

Staple fibre is not entirely new in India, certain mills have used it with great success, although its import has been severely restricted. Notwithstanding high import duty, staple fibre is available today at a price lower than any imported cotton. The present purpose is to suggest a constructive plan and in so doing it is important to see this raw material in correct relation to the Indian textile industry. The fact that Europe and America finds it highly satisfactory and India to date has used so little, is evidence only of restrictive controls not of any unsuitability in the raw material. Unfettered import of staple fibre can at best only be regarded as a temporary expedient. India must produce her own man made fibres.

Based upon the present cost of raw materials and present capitalisation, staple fibre could be produced in India to sell at Rs 910 per candy. It must also be noted that this is a raw material capable of spinning from 10s to 100s counts and that the waste, with efficient spinning is not more than 3 per cent.



The practical use of Staple Fibre

Staple fibre can be processed over normal cotton spinning machinery with only minor modifications. These modifications tend to a simplification of the process particularly in the preparatory stages. Staple fibre is delivered to mills perfectly clean and entirely regular in staple length. Consequently there is no dirt or short fibres to be eliminated. It can again be used in blends with cotton wool or silk. Staple fibre union fabrics are particularly attractive and serviceable. In combination with cotton the particular qualities of both fibres are asserted. The dry strength of staple fibre is usually greater than cotton but it loses 40 per cent of its strength on wetting. The wet strength may be increased considerably by blending with cotton. On the other hand a strong staple fibre is now available with a wet strength almost equal to that of cotton and a dry strength considerably greater. Staple fibre can be produced in almost any combination of staple length and fineness according to the requirements of the spinner. It is also produced as spun dyed. In this case the liquid viscose is pigmented prior to extrusion and in this manner an attractive range of entirely fast and regular colours is available. This presents great possibilities for the production of embroidery yarns and loom finished fabrics particularly suited to many districts of India where dyeing and finishing is an undeveloped art.

Technical and Financial Aspects

It is frequently complained that India lacks the technical skill to implement a project of this type. However, the great advantage in this proposal is that United Kingdom plant and machinery suppliers would undertake responsibility for supplying the entire plant and full technical assistance in the start up and running of the factories. Skilled technicians from the United Kingdom and the Continent of Europe would be supplied to instruct Indian personnel in the manufacture and processing of staple fibre. Attached to the project would be a central pool of technicians ready to be called upon by any cotton mill using staple fibre and requiring instruction or guidance in its best application.

Another great advantage is that a scheme such as this may be accepted in whole or in part. Each plant may be designed as an integral unit and the units could be installed progressively over any reasonable period of time.

In these days of retrenchment and curtailment of industrial enterprise a proposal such as this may be acclaimed with enthusiasm but the question of finance immediately arises. It is not within our present province to suggest how public or private capital should be canalised. The significant fact however remains that India is spending each year on imported cotton sufficient to finance the whole project and if the will and determination to succeed in economic adversity is there ways and means can be provided.

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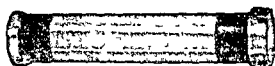
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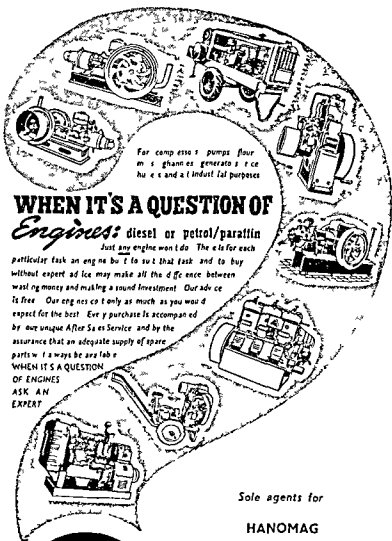
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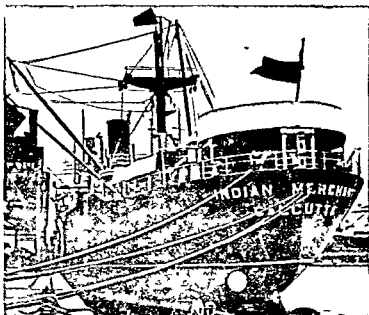
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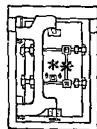
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THE Cotton Textile Industry is one of the biggest and most important industries of our country. Judged from the point of view of employment, capital investment, production and general economic condition, the industry occupies really a foremost place in the economic structure of our country. It gives employment to nearly 6½ million workers, as will be seen from the following table which gives average daily number of workers employed in cotton mills according to States.

Average daily number of workers employed in cotton mills in Indian Dominion in 1948/49 according to States

State.	Average daily number of workers employed.
Bombay	403 408
Ajmer-Merwara	6 071
Bihar	1 729
M. P. and Berar	3 789
Delhi	13 903
Madras	86 176
U. P.	59 257
West Bengal	31 053
Punjab	3 326
Total	643 931

The above figures relate to 1948-49, and the latest employment position will show perhaps a little shrinkage. At any rate, the Indian Cotton Mill Industry is employing at least six million workers at different centres.

Recruitment

The methods of recruitment are being continuously improved and in Bombay, Ahmedabad and Sholapur a Decasualisation Scheme has been introduced by the Govern-

ment of Bombay, under which a Central Exchange for securing the necessary supply of workers to the Industry at these centres has been functioning. The managements of mills are not allowed to recruit workers directly, but have to submit requisitions to the Manager, Decasualisation Scheme, who maintains a register of persons who have already worked in the Industry and who are seeking employment. It is important to note that crude and corrupt methods have now thoroughly been discarded as far as the important centres of Cotton Mill Industry are concerned, and every effort is being made to solve the recruitment problem by introducing Central Labour Exchange.

Shift Working

A large number of mills in Bombay, Ahmedabad, Sholapur, Kanpur and other centres work more than one shift, and some of them are working a third shift partially in some of its sections—normally spinning—in order to balance the yarn production to the requirements of weaving. In Bombay, there is a regular system of change-over of shifts and a worker who is working in the second shift in a particular month, is transferred on to the first shift in the succeeding month. The usual timings are so adjusted that the second shift closes by about 1 p.m. so that workers get natural sleep during the major part of the night.

Absenteeism

The statistics of absenteeism have been compiled by the Labour Department of the Government of Bombay, and by Labour Departments of some of the other State Governments. They are usually published in the monthly issues of the Labour Gazette and similar publications of other State Governments. The following table gives the annual aver-

age percentage of absenteeism at important centres of the Cotton Mill Industry —

	Bombay	Ahmedabad	Sholapur	Madras	Coimbatore	Kanpur
1916-Average ..	14.2	7.4	20.1	11.0	12.0	12.9
1947-Average ..	14.4	8.4	19.1	10.3	14.7	16.1
1948 Average ..	13.2	8.0	18.2	9.2	14.5	16.4

The latest figures of monthly absenteeism are set out below for information —

(Day Shift)

January 1919	11.08
February "	13.83
March "	14.61
April "	15.29
May "	15.59
June "	16.17
July "	15.01
August "	14.34
September "	14.03
October "	15.75
November "	14.58
December "	14.45
Average	14.66
January 1950	11.71
February "	13.81

Earnings

The following table shows the trend of average annual earnings of cotton mill workers in India —

Industry	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Cotton	Rs 320.2	323.1	343.6	653.6	772.2	723.4	721.8	900.3	1094.4	

During the last 2½ years minimum wages and schemes of Standardisation of Wages have been introduced in Bombay, Ahmedabad, Sholapur, Khandesh, C.P. and Berar centres of the cotton mill industry. The following table shows the minimum wages fixed for workers at different centres of the cotton mill industry in the country

Centres	Minimum Wage
Bombay	Rs. 30 for 26 days
Ahmedabad	" 29 "
Sholapur	" 26 "
Khandesh	" 26 "
C.P. and Berar	" 26 "
Bombay and other centres in the State of Madras	" 24-8 "
Vijayawada	" 21 5 "
Hubli	" 21 5 "
Gadag	" 21 5 "

The average basic earnings of all the workers at some of the important centres are as follows —

Centres	Average monthly earnings (exclusive of dearness allowance)
Bombay	Rs. 41 for 26 days
Ahmedabad	" 42 "
Sholapur	" 39 "
Khandesh	" 37 "

Dearness Allowance

The quantum of dearness allowance paid to cotton mill workers at different centres, differs very widely. In Ahmedabad, Rs 65 to 70 has been the level of dearness allowance paid during the last 12 months, while in Bombay, it was between Rs 50 to 55. Sholapur workers are getting almost the same dearness allowance as Bombay workers. Textile centres in Gujarat are paying about 90 per cent of Ahmedabad dearness allowance. The level of dearness allowance paid to workers in Khandesh has been in the neighbourhood of Rs 45 to 48 during the past six months. It is important to note that in all the important centres, the dearness allowance has been linked up with the cost of living index series compiled by the Government of Bombay and other State Governments. In the case of Bombay, the dearness allowance is paid in order to neutralise 90 per cent of the minimum wage, i.e. Rs 30, for rise in the cost of living index subsequent to August 1939. The corresponding figures for Ahmedabad is 100 per cent neutralisation on the basis of the Ahmedabad cost of living index number, while in the case of Sholapur, the neutralisation percentage is 66 2/3rds.

Bonus

In addition to wages and dearness allowance, the workers in cotton textile mills in all the centres have been getting bonus every year, either as a result of collective bargaining or an Award of the Industrial Court or Industrial Tribunal. Till the year 1945, the Millowners' Association had voluntarily been granting bonus to workers employed in cotton textile mills in the City of Bombay. For the year 1948, workers in cotton textile mills in Bombay and Ahmedabad, got 4½ months' basic wages as bonus. The bonus for workers in Bombay in 1949 was 2 months' basic wages as the gross profits of the industry declined.


Size and Composition of Workers' Families

Several family budget investigations have been under taken by the Government of India, as well as by State Governments. The Labour Bureau of the Government of India, in collaboration with the Labour Department of State Governments have recently published family budget reports of enquiries conducted during 1943-44 in about 25 important industrial centres. The following table will show the average size and composition of families of cotton mill workers in important centres in Bombay, M.P. & Berar and Delhi —

	Number of persons per family in the City	Earners	Dependents	Average No. of dependents living away from the family	Total of col. 2 and col. 4
	1	2	3	4	5
Bombay State:					
1. Ahmedabad	4.76	1.88	2.77	0.48	4.81
2. Bombay	3.91	1.53	2.41	0.62	4.55
3. Jalgaon	5.28	1.68	3.92	0.07	7.65
4. Sholapur ..	5.39	1.85	3.54	0.14	5.53
M.P. & Berar:					
1. Jabalpur	5.08	1.84	3.24	0.06	5.14
2. Jabalpur	4.06	1.66	2.40	0.73	4.79
Delhi	3.80	1.34	2.46	0.64	4.48

Message from the President of the Federation of Indian Chambers of Commerce and Industry . . .

I am glad to learn that Mr. M. P. Gandhi is bringing out this year an illustrated volume of the Indian Cotton Textile Industry Annual to celebrate the first Centenary of this industry. He has been rendering a valuable service by publishing the Annuals which have helped the development of this industry to a good extent by making available detailed and authentic information on all its aspects. I hope this Centenary Volume will help its readers in making a correct assessment of the present position of this industry which has grown to its existing dimensions through the efforts of the Indian industrialists even in the face of heavy odds. I wish Mr. Gandhi all success in this laudable effort.


K. D. JALAN.
PRESIDENT.
(1949-50).

From the Deputy Chairman, National Planning Commission . . .

For many decades I have been connected with the textile workers of Ahmedabad and of other centres of the textile industry. During this period I have had to deal with numerous problems concerning both the workers and the industry. There were frequent occasions in the past when I found it necessary to refer to your Annual publication. I am sure it has rendered useful help to many others interested in the conditions and problems of the textile industry. The idea of bringing out a Centenary Volume is very welcome indeed. It is bound to bring together a wealth of information on the subject of the textile industry which will be of interest and help to a large number of people

G. L. NANDA.

Legislation affecting Indian Cotton Mill Workers

The following Acts apply to cotton mill workers in India

- 1 The Factories Act, 1948
- 2 The Indian Trade Unions Act, 1926
- 3 The Industrial Disputes Act, 1947
- 4 The Workmen's Compensation Act, 1923
- 5 The Industrial Employment (Standing Orders) Act, 1946
- 6 The Employees' State Insurance Act, 1948
- 7 The Bombay Industrial Relations Act, 1947
- 8 The Maternity Benefit Acts in several States

The Factories Act, 1948, is modelled on similar legislation prevailing in Great Britain, and is an all round improvement over the Factories Act of 1934. This Act applies to all factories wherein ten or more workers are working with the aid of power, or wherein 20 or more workers are working without the aid of power. Under the Act, every factory is required to secure a licence. The provisions regarding health and safety have been made more stringent, and the employers are required to provide canteens, dining sheds and rest rooms for the benefit of the workers. The provisions relating to holidays with pay have been liberalised and under the present provisions, workers are entitled to 15 days leave with wages on certain conditions. The Industrial Disputes Act and the Bombay Industrial Relations Act, prescribe machinery for settlement of disputes and the Industrial Employment (Standing Orders) Act provides for settlement of Standing Orders to regulate the day-to-day relations between management and men. The Employees State Insurance Act, which was passed in the year 1948, has not been brought into force as yet, but when it is brought into force, it will replace the Workmen's Compensation Act, and the Provincial Maternity Benefit Acts. This enactment secures for the workers, sickness, disablement and maternity benefits.

Classification of Workers

The classification of workers in the cotton mill industry is governed by Standing Orders particularly in centres in Bombay State. There are five classes as follows—

- 1 Permanent
- 2 Temporary
- 3 Badli
- 4 Probationary
- 5 Apprentice

Under the Standing Orders, permanent operatives are entitled to 14 days notice or 13 days wages in lieu of notice at the time of discharge, while no notice is required in the case of other classes of workers. The badli or substitute workers are employed to fill in casual or permanent vacancies among permanent workers. The number of substitutes to be employed depends upon the percentage of absenteeism among permanent workers. The Millowners Association Bombay, started what is known as "Badli Control System", since 1935, with the object of decentralising such labour. The system has been introduced in all the Bombay Mills and has worked well.

Appointment of Labour Officers

Almost all the mills in Bombay have appointed Labour Officers to look after labour matters in the mills. These officers are in charge of recruitment of labour, and the grievances of workers are also looked into by them. They are in charge of welfare activities of the mill and represent the mills in all the proceedings under the Bombay Industrial Relations Act.

Apprentice Schemes

There are two kinds of apprentices that are entertained in the mills—(i) those trained in the apprentice training scheme of the Bombay Social Service League, and (ii) those trained in the apprentice training scheme of the Government of Bombay. This latter scheme was introduced about 10 years ago. The Social Service League's Textile Technical School is conducting both pre-employment and post-employment training courses. Some of the mills have their own Schemes, particularly for training weavers.

Welfare Work

A large number of mills are carrying on welfare work for the benefit of their work people. All the mills in Bombay have their own dispensaries, mill canteens, and grain shops. All the workers have registered their ration cards with the mill grain shop, which supplies not only rationed foodgrains, but also other articles of food and articles such as soap, kerosene, coconut oil, etc. The prices are fixed.

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by the Millowners' Association for the article every month. All the mill grain-shops sell different articles at a price fixed by the Association. All the mills have employed full time or part time Medical Officers and in a few cases, Medical Officers in charge of dispensaries also visit the workers in their dwellings. The other items of welfare activities carried on by mills are sports clubs, Gymnasiums, Libraries, Literacy classes, etc.

Co-operative Movement amongst Cotton Mill Workers

The Bombay centre has given a lead to the Co-operative Movement among the cotton mill workers. There are over 40 Co-operative Societies in different mills and 80,000 workers are members thereof. The paid up capital is in the neighbourhood of Rs 50 lakhs and the deposits amount to nearly Rs 13 lakhs. No progress has so far been made in branches of the Co-operative Movement other than credit societies, and proposals are being made to start Consumers' Co-operative Societies in the near future.

Trade Unions

Trade Unions have been established in the Cotton Mill Industry since 1918, when the first union was organised in Bombay City. The Trade Union Movement had a chequered career and has recently assumed certain proportions. During 1948, as many as 4 lakhs of workers were members of 200 unions in the Textile Industry in India.

Industrial Disputes

The following figures give the number of industrial disputes, number of workers involved, and the number of man-days lost during 1949 in the cotton mill industry in India month by month —

Month	No. of disputes	No. of workers involved	No. of man days lost
January 1949	17	24,132	332,641
February	22	31,593	288,233
March	17	14,338	30,419
April	12	10,659	146,423
May	19	14,729	184,531
June	21	28,708	227,253
July	40	72,398	237,063
August	22	39,157	283,146
September	10	4,487	100,155
October	16	30,967	213,190
November	18	31,563	132,773
December	21	27,989	250,533
Total	235	332,278	24,44,383

Cotton, Wool and Silk Industry

Year	No. of Disputes	No. of workers involved	No. of man-days lost
1944	128	15,826	19,98,344
1945	271	296,463	11,49,696
1946	631	10,51,231	52,98,932
1947	671	9,18,405	73,98,039
1948	393	494,259	37,48,551

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FIRE	-	-	-	Rs 25,00,000
MARINE	-	-	-	" 4,00,000
ACCIDENT	-	-	-	" 4,00,000

1947

FIRE	-	-	-	Rs 28,00,000
MARINE	-	-	-	" 7,00,000
ACCIDENT	-	-	-	" 5,00,000

1948

FIRE	-	-	-	Rs 30,00,000
MARINE	-	-	-	" 5,00,000
ACCIDENT	-	-	-	" 7,00,000

1949

FIRE	-	-	-	Rs 34,71,000
MARINE	-	-	-	" 7,11,000
ACCIDENT	-	-	-	" 8,95,000

Total Gross Premium exceeds 50 lakhs in 1949

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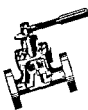
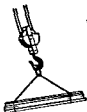
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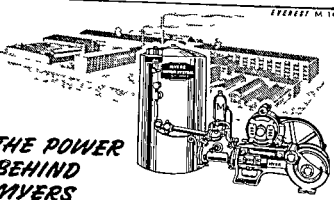
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HANDLOOM INDUSTRY IN INDIA

By Dr. B. V. NARAYANASWAMY NAIDU, M A , Ph D , B Com , Bar at Law

Role of Cottage Industries

WE are today living under a regime of planned economy all over the world. But economic planners of our country are faced with three sets of alternatives—nationalisation v private enterprise, central & provincial or regional planning, and large scale & cottage industries. The right path in each of these sets is, of course, the golden mean. There must be a healthy development of both large scale and small scale industries. The spheres of these industries must be distinct, they must be complementary and not competitive. The place of cottage industry in the economic development of the country has been well realised by the government in power and the development of cottage industries, like the handloom, side by side with the mill industry has been officially recognised as one of the objectives of its industrial policy. A Cottage Industries Board comprising of representatives of the Union Government, States and some organisations of cottage industries has also been set up by Government with a view to advising and assisting Government on the organisation and development of cottage industries. The Honble Dr Syama Prasad Mookerjee, lately Minister for Industry and Supply, enunciating the industrial policy of the Government in 1948 expressed the view that 'cottage and small scale industries have a very important role in the national economy, offering as they do scope for individual village or co-operative enterprise, and means for the rehabilitation of displaced persons. These industries are particularly suited for the better utilisation of local resources and for the achievement

of local self sufficiency in respect of certain types of essential consumer goods like food, cloth and agricultural implements."

Ancient Handloom Industry

Among the cottage industries of India, the handloom industry is easily the country's largest and best organised one. Long before Egypt blossomed into Cotton, India had built up a tradition for centuries in this respect and indeed, she is the birth place of cotton manufacture. Written records show that the muslins of Dacca, the Calicoes and chintzes from Masulipatam and other places on the Coromandal Coast and the gold and silver wefts from Ahmedabad and Banaras were the envy of the trading world. Indian textile products had always been wonderful things of beauty, coveted by the civilized countries of the ancient world like Egypt, Greece and Rome. Even during the middle ages and the early modern period, the fineness of Indian handloom fabrics was the wonder of the westerners and these fabrics were ranked with the best works of art. The large volume of international commerce in handloom fabrics of India carried on from very ancient times to the beginning of the nineteenth century is too well known to need elaboration here. South India, specially, had a monopoly in the Madras handkerchiefs exported to Africa and Kailies exported not only to the other provinces in this country but also to Ceylon and Burma. The lungis were equally famous in the overseas market even in modern times.

TABLE I

Exports of Madras Handkerchiefs, Shawls, Lungis and Saris from India
(1920-1939)

Year	Madras Handkerchiefs and Shawls (No. in million)		Lungis and Saris (In million yards)	
	Madras	All India	Madras	All India
1920-21	2.0	2.6	20.5	21.9
1925-26	2.3	3.2	31.0	33.4
1930-31	2.6	2.8	19.2	20.8
1935-36	0.8	0.8	10.3	11.3
1938-39	0.6	0.6	11.2	12.9

Decline of the Handloom Industry in India

But the machine age sounded the death knell of India's excellence and mastery in the cotton world. The Industrial Revolution in England and the progressive tightening of the channels of trade in Calicoes and cotton cloth by the government in that country led to a rapid decline of the industry in India. The Suez Canal, the locomotive and the automatic shuttle conspired to hamstring India's handloom industry. Within the country, the markets were inundated with cheap mill-made cloth produced on mass production basis in the western countries and, suffering under the cut-throat competition from this cheap stuff, the handloom cloth even up to the present day has not recovered from the breach made in its market. The patronage of the courts also vanished with the disappearance of independent durbars and the middle classes took to the occidental mode of dress which needed hardly any handloom fabric. The change in sartorial habits effected by the middle classes gradually spread to the poorer income groups with the consequence of still further reducing the capacity of the home market to absorb handloom cloth.

There was not for a long time any serious competition between the Indian mills and handlooms, rather the relationship between them was complementary. In the beginning the greater part of the yarn produced in the Indian mills was either sold to the handlooms, or exported (mainly to China) and only a small part was woven in the mills. But World War I changed the position. Due to cessation of imports and the stimulus of war-time demand, Indian mills themselves began using more of their yarn leaving very little for the handlooms. The consumption of yarn in mills increased from 74 million lbs in 1896-97 to 817 million lbs in 1938-39 and that of handlooms from 185 to 425.8 million lbs. The proportion of mill consumption to handloom consumption had risen from 40% in 1896-97 to 191.7% in 1938-39. The mill consumption was less than half that of handlooms in 1896-97 but in 1938-39 it was double that of handlooms. During the period, the mill consumption had increased by 11 times while that of handlooms increased by only 2.3 times.

The decline of the industry can further be evidenced by the fall in the number of workers engaged in the industry, dwindling of wages to a ridiculously low level and the low exports of special fabrics like Madras handkerchiefs and

shawls as can be seen from Table I. The quantity of cloth produced on the handlooms has also not kept pace with that of mill production. The table below gives the number of workers engaged in both the mills and the handloom industry (1901-31) —

TABLE II

Workers in Cotton Spinning, Weaving and Sewing
(in thousands)

Year	Workers in Cotton Mills (Spg & Wvg)	Remainder (Handloom Industry)
1901	172.9	22.97
1911	230.0	29.71
1921	332.2	240.73
1931	392.5	211.55

The proportion of mill workers to that of handloom workers has increased in the past three decades from 53% in 1901 to 187% in 1931. While the number of workers in Cotton mills has increased by 228%, the number of workers in the handloom industry has decreased by about 35%. Between 1900-01 and 1938-39 while the production of cloth on handlooms had increased from 646.4 million yards to 1,703.2 million yards, the production in mills rose from 420.6 million yards to 3,905.3 million yards. This means that during the period while the production on handlooms

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increased by only 263 times, production in mills has increased by 9.27 times. The mill production in 1900-01 was only 65 1/2% of handloom production whereas it formed 229.3% of handloom production in 1938-39.

The wages earned in an industry is the true index of the prosperity of the industry. The Tariff Board (1932) remarked, "Since the handloom weaver cannot regulate his production according to the state of the market without risking starvation for himself and his family, the true criterion for judging the position of the handloom industry is not the proportion of the quantity of cloth woven on hand looms to the total production but the wages earned by the handloom weaver. Judged by this test, his position on the evidence we have received must be regarded with some concern. There was an all round fall in the wages, and consequently in the earnings of the weaver, before World War II. In Belgium the wages of the weaver per day fell from Re 1-8-0 in 1929 to Re 0-12-0 in 1932, in Dhulia it fell from Re 1-4-0 in 1927 to Re 0-4-0 in 1931, in Bhingar from Rs 3-8-0 in 1927 to Re 0-8-0 in 1938 and in Malegaon from Re 0-14-0 in 1927 to Re 0-4-0 in 1938. The well known handloom centres in Madras were also similarly affected."

During this period, the overseas market enjoyed by the Indian handloom weaver was also curtailed by the competition of mill products from India and abroad. The exports of Madras handkerchiefs and shawls (as will be seen in Table I) fell from 2.6 million in 1920-21 to 0.6 million in 1938-39. In other words, India's income from this item fell to nearly a fourth of what it was in 1920-21. Not only the growth of the mill industry and the change in the dressing habits of the people but also the rise and rapid growth of the swadeshi movement hastened the decline of the handloom industry which was mainly dependent on foreign yarn. Mr Kasturbhai Lalbhai giving evidence before the Tariff Board in 1932 stated that the ills of the handloom weaver were not due so much to the import duty on yarn as to the "great Swadeshi movement which has come over the country and which hampers him from marketing his goods from the imported yarn. Thus, as Mr R D Bell properly observed, the handlooms were finally beaten and not only beaten but probably severely crippled for the time being."

Present Position

Thanks to World War II, the Industry once again got a fillip due to the overall shortage. But inadequate supply of yarn was a stumbling block to the real prosperity of the industry. Added to this, the existence of innumerable middlemen deprived the actual weaver of the benefits of the rising demand leading to a better price. Scarcity of raw material on the one hand and organisational defects on the

other kept the weavers miserable even during the first half of World War II.

However, the introduction of controlled distribution of yarn to the actual weavers and the spread of the co-operative movement put the weavers in a better position and they began slowly to get out of the clutches of the master weavers. These factors have had a favourable effect on the general level of wages in the industry which showed rapid signs of rising. In Madras where the writer had an opportunity to enquire into the labour conditions in handloom industry in 1947, he found a stupendous rise in wages between 1940 and 1947. But the rise in wage rates was not uniform in all the places. Wages of some fabrics rose by about 11 times but that of others between 3 and 6 times only. Thus it will be found that the prosperity of the industry was not shared to the same extent by all classes of weavers. Those engaged in the manufacture of special fabrics earned much more than their confreres. In short, the prosperity too was localised.

Importance of the Industry

World War II revived the handloom industry in India, it was indeed a turning point in the history of the handloom industry. The importance of the industry in the economic set up of our country is evident from the large number of people engaged in, and the still larger number of people dependent on it for their livelihood. The Fact Finding Committee (Handloom and Mills) had estimated the total number of looms at 2 million, of which 1.7 million are active. The total number of weavers including auxiliary workers is 6 million and the total number of people dependent on the industry is 10 million. The production in 1946-47 was as high as 1,270 million yards. In spite of the fact that the cotton mill industry is well established while the handloom industry is still disorganised production of handlooms forms 1/3rd of the total mill production and it accounted for nearly 26% of the total cloth consumption in the country in 1946-47. Against 6 lakhs of workers engaged in the cotton spinning and weaving factories the handloom industry provides employment for as many as 24 lakhs of people or 4/5ths of those engaged in the cotton textile industry.

Decline of the Industry in other Countries

The spurt given to the industry by the global war should not however, make us complacent. The handloom industry is the largest single industry which affords employment to a large number of people. When decentralized production has become the order of the day due to military and strategic reasons, it would be folly to allow the decay of this industry which is ideally suited for decentralized production. Left to itself the industry will perhaps be reduced to the posi-

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tion of a small handicraft concentrating on the production of a few speciality cloths. In Japan the small scale industry of which is often glorified between 1923 and 1934 the number of handlooms engaged in the production of cotton cloth fell from about 150 000 to about 55 000. In that country, wherever handlooms are used for cloth production, they are only used for producing pattern goods for home consumption. In countries like the U.S.A. the few handlooms that survive are confined to the production of speciality goods like upholstery cloths, table linen, etc.

Concentration of the Industry

The industry, though widely scattered all over India, is heavily concentrated in a few provinces. The concentration of the industry is set out in the table below —

TABLE III
Number of Looms and Workers in 1940

Province	Number of looms and weavers	Number of dependents	Total number dependent on the industry
Assam	411 018	1 933 924	1 644 072
Bengal	121 013	353 057	484 076
Bombay	143 300	309 909	413 200
Madras	294 101	832 335	1 176 404
Punjab	927 925	631 835	900 180
U. P.	194 420	578 674	771 569
Hyderabad	108 7 5	3 6 325	430 100

Assam ranks first in the number of looms and weavers, and Madras and Punjab rank second and third respectively. These three States alone have about 10 lakhs of looms and account for 50% of the total number of looms in the country. As regards concentration of the industry, these three provinces are more or less equally well situated but in the production of exportable fabrics, Madras plays a predominant role. Particularly in the export of Madras handkerchiefs, it has got a monopoly.

Problems of the Handloom Industry

The problems confronting the handloom industry in our country relate mainly to the provision of raw materials, organisational set up, marketing and commercial intelligence service and the meeting of competition from mill made goods. In spite of innumerable vicissitudes of fortune and adversities the handloom industry has survived the competition from mills. Reorganisation of the industry rationalisation of production and the provision of better marketing facilities will put the industry on a sounder footing.*

Yarn Supply

From the time the Indian mills began consuming their yarn for weaving the handlooms were handicapped in respect of the supply of their raw materials. Due to the protection of the cotton mill industry the price of imported yarn to the handlooms increased and Indian mill yarn was

* Also see M. P. Gandhi's "Indian Handloom Industry Annual" (19 0).

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not available because it was consumed by the mills themselves. Even if Indian mill yarn was available, the price by the time it reached the weaver after passing through the chain of middlemen, was high. The mills thus had an initial advantage over the handlooms. Supply of yarn in adequate quantities and at a reasonable and cheap price is a *sine qua non* of the growth and development of the industry. To achieve this end, it is desirable that there must be not only more and more production of Indian yarn but there should also be a lowering of the price by the elimination of middlemen from the distributive channel. The co-operative movement alone can eliminate the chain of middlemen, or at least reduce their number to a considerable extent. As the price of yarn is a major item in their cost of production, forming nearly 50 to 60%, the lowering of the price will help the handloom products against the competition of the mills.

Middlemen in the Industry

The organisation of the industry is beset with a large number of middlemen, in the supply of yarn, in the production of cloth and in the marketing of the finished product we find a series of middlemen. Before an independent weaver takes charge of his yarn, it passes through a number of middlemen like the wholesaler, retailer, master weaver, etc. The existence of master weavers in the industry who supply the yarn and pay the wages has reduced the weaver to the position of a wage earner. Just as any other manual labourer the weaver gets his wage, which is very low in view of the skilled nature of his work, and the ever present fear of frequent unemployment due to scarcity of yarn.

Organisational set up in the Madras State

The organisation of the handloom industry in the Madras State takes numerous forms of which four are important. In the first and the most predominant form the independent weaver is the central figure. He owns his loom and other smaller instruments of production, buys yarn and raw

materials directly and pursues, in general, his trade as an independent craftsman. He sells the finished product in the open market. He bears all the risks due to fluctuations in prices of yarn and cloth. His earning is proportional to his efficiency as a weaver and a businessman.

In the second type of organisation the master weaver is the central figure. He supplies yarn and other materials to a group of weavers working under him and collects the cloth woven by them and sells the cloth in the best market he can choose. The weavers working under him are paid only wages at specified rates, their earnings are not affected by changing market conditions. They run no risk, nor do they reap any profit even when conditions are extremely favourable. In most cases, the master weaver happens to be a cloth merchant as well. These master weavers may well stand comparison with the clothiers of 18th century England. The weavers employed by the master weavers in this State take the cloth woven to their masters and get from them yarn, etc. These weavers are found to be working at home, either with their own looms or those hired out by the master weavers or their agents.

The factory system is the third type of organisation. The West Coast is the home and the stronghold of the factory system. While big factories employing hundreds of weavers are few in number in this region, it is filled with small ones employing five to ten weavers.

Co-operative Movement

The weavers co-operative society for production and/or sale is the fourth type of organisation, it has become popular in recent years. The Societies distribute yarn to the members. The members of the society are paid pre-determined wages and the cloth is taken by the society and sold direct to dealers and consumers. Although this is the general method of organisation some variations do occur such as the selling of yarn at cost price to the members and buying the cloth woven. The purchase price of cloth is arrived at by adding the wages bill to the cost of yarn. The progress made by the co-operative movement in

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CLOTH SHIRTING DHOTIES SARFES JAGANNATHI CHADDARS DRILLS DOSUTIES

the Madras State in forming weavers' co-operative societies and bringing weavers into their fold is striking. The number of societies has increased from 174 in 1938-39 to 893 in 1947-48. From about 9,766 in 1941-42, the number of looms in the societies had risen to 133,199 in 1947-48 or by nearly 13 times. The paid up share capital in 1947-48 was Rs 62.20 lakhs against Rs 1.27 lakhs in 1939-40. The rapid progress made by the co-operative movement in Madras may be seen from the table below —

TABLE IV

Weavers' Co-operative Societies in Madras

Particulars	1945-46	1946-47	1947-48
Number of Societies	338	659	893
Number of members	68,285	108,675	133,263
Number of looms	39,452	85,321	133,199
Paid up Share Capital (Rs. lakhs)	2,100	38.75	62.20
Value of Cloth produced	347.69	423.91	668.10
Value of Cloth sold	373.19	456.54	814.15

Due to the vigorous drive by the Co-operative Department and the introduction of yarn ration cards large numbers of dependent weavers have left their master weavers and have become members of the co-operative societies or set them selves up as independent weavers. This transformation from dependent to independent status has been accelerated during the war period by the unusually heavy demand for and high prices of handloom products. During this period the problem of marketing ceased to exist. During an enquiry, it was found that between the period 1941 and 1947, the percentage of independent weavers and weavers of the co-operative society to the total increased while that of the dependent weavers fell. The following table gives the position in Madras State —

TABLE V

Proportion of the different classes of Weavers (Madras)

Class of Weavers	1941		1947	
	Number	Percentage	Number	Percentage
Independent Weavers	118,769	23.0	61,621	46.9
Dependent Weavers	256,630	60.0	38,224	29.2
Coolie Weavers	31,218	8.0	19,199	14.6
Weavers of the Co-operative Society	17,108	4.0	11,957	9.3
Total	427,716	100.0	130,999	100.0

The favourable war time factors have encouraged the dependent weavers to get out of the clutches of the master weavers. This is therefore, the best time to launch a drive to bring the weavers under the co-operative fold and eliminate the middlemen.

Marketing

The difficulty of marketing has been responsible for the perpetuation of the class of middlemen. Financially

crippled and ignorant of the methods of marketing, weavers of humble means fall an easy prey to the master weavers. Lack of publicity and propaganda in foreign countries has been a grave defect in the entire export trade in handloom products. There is no agency to safeguard the special interests of the handloom industry in the foreign markets or to study problems in relation to the export trade at present. The export trade is left wholly to the mercy of extraneous forces. It is the duty of the Government in the interest of the industry to require the exporters to adhere to certain approved specifications. Lack of standardisation has been responsible for confining the marketing of handloom products to 'spot' transactions.

To promote the export trade of our handloom products, the services of the Indian Trade Commissioners and similar official agencies abroad might be utilised to develop the various markets by means of extensive propaganda, maintenance of museums of handloom products in the consuming centres, etc.

Research

Yet another problem of the industry is that of Research. While the organised textile industry has schemes for setting up research institutes on the model of the Shirley Institute of Manchester with the assistance of funds collected under the Cotton Textiles Fund and contributions made by the industrialists, and a few like the Ahmedabad Textile Industries Research Association have actually been formed, the need for a separate research institute for the handloom industry does not seem to have received any serious attention. It is hardly necessary to emphasize that research in regard to handloom production has definitely to be directed on different lines than research regarding the organised industry. Finances required for such an institute would be comparatively small and it should not be difficult for the Government to provide the necessary funds.

Mill Competition

Lastly the vexatious problem of competition with mills. These two hands of the textile industry are absolutely essential for the country's economic prosperity. At least in certain fabrics, the monopoly of the handloom cannot be given up for some decades to come. The traditional conservatism of Indian women in sartorial habits, particularly as regards the saree, may be depended upon to ensure a continuous flow of demand for handloom sarees. The exportable fabrics like Madras handkerchiefs, lungis, Karkies, furnishing fabrics etc. will always play an important role in the preservation of this industry. No doubt the mills are now producing and selling cheaply some fabrics similar to those produced on handlooms. But still the average villager goes in for the handloom stuff for he has an implicit faith in the durability of the cloth and buys it in spite of its prohibitive price. Both the mill and the handloom have a great many interests to safeguard and what is required to make their interests much more compatible is careful planning. Of late there has been a natural adjustment between their spheres of activity and by deliberate direction this can be made more complete and fruitful.

The writer would suggest frequent conferences of the mill and handloom interests under the auspices of the Government, which would pave the way for a fuller understanding between them and for an amicable settlement of differences. With a rationalised demarcation of the spheres the handloom industry and the mill industry can be complementary, particularly in the production of coloured fabrics and specialty fabrics.

The handloom industry has survived the storm of competition and will survive. The question is whether it will survive as a relic of primitive economy, a symbol of sweating and low standard of living or whether it will survive and grow strong as the corner stone of a healthy, decentralised modern economy which will maintain in freedom millions of families on a reasonable standard of comfort, while ensuring to the population at large a steady supply of clothing even at times of possible insecurity. The industry has got to be maintained to meet one of the basic needs of human life. The effects of the deterioration of the industry may not be felt as much in its production aspect as in the unhappiness and misery it would cause to a class which is highly skilled. A certain amount of mutual adjustment is bound to revive the industry in all its ancient glory. The handloom weavers who have already achieved wonders in the age of machinery once observed Sir Alfred Chatterton an eminent Director of Industries, Madras will be able to turn the tables on the powerloom if but a fraction of the capital energy and organisation were devoted to their trade that have been expended in pushing powerlooms. Though one may not share the robust optimism of Chatterton one can be sure that if instead of talking much about the mill competition, the handloom industry devotes more attention to marketing and other organisational problems it will go a long way not only in stabilising the industry but also in contributing to the economic prosperity of the country. The problems of the handloom industry are hydra-headed. What is needed is a corrective inside the industry so as to place the industry on a sounder footing.

APPENDIX I

Cotton Yarn consumed and Cloth produced in Indian Mills and Handlooms

Year	Cotton yarn consumed in m lbs (a million lbs)	Cotton cloth produced in m ls (a million yds)	Yarn available to handlooms (a m ll on lbs)	Cloth produced on handlooms (a m ll on yds)
1	2	3	4	5
1900-01	88	420.6	161.8	645.4
1901-02	108	507.7	209.8	827.2
1902-03	109	571.0	296.2	904.8
1903-04	121	578.4	2. 87	926.8
1904-05	139	664.4	234.3	917.2
1905-06	145	693.1	258.5	1 033.8
1906-07	147	702.7	275.4	1 101.6
1907-08	168	803.0	267.6	1 050.4
1908-9	171	817.4	265.5	1 066.1
19 9 10	201	975.1	211.4	845.6
1910-11	213	1 042.0	217.0	868.9
1911-12	228	1 137.6	247.7	894.6
1912-13	254	1 214.1	235.7	942.8
1913-14	245	1 171.1	255.7	1 018.9
1914-15	216	1 175.9	272.0	1 088.0
1915-16	312	1 496.1	216.2	944.8
1916-17	336	1 606.1	149.4	597.6
1917-18	338	1 615.6	183.2	741.2
1918-19	310	1 481.8	227.5	899.0
1919-20	341	1 630.0	126.5	566.0
19 20 21	347	1 663.1	232.8	931.2
1921-22	359	1 716.0	234.5	938.0
1922-23	360	1 720.8	271.0	1 064.0
1923-24	355	1 696.9	204.2	816.6
1924-25	405	1 835.9	252.7	1 010.8
19 25 26	411	1 964.6	222.1	888.4
1926-27	474	2 205.7	204.2	816.6
1927-28	498	2 370.9	302.7	1 210.8
1928-29	389	1 8 4	243.3	973.2
1929-30	493	2 355.5	3 06	1 287.4
1930-31	519	2 450.6	314.3	1 257.2
1931-32	601	2 872.8	333.1	1 332.4
1932-33	624	2 982.7	379.8	1 519.2
1933-34	579	2 767.6	215.5	1 252.0
1934-35	650	3 130.7	313.9	1 255.6
1935-36	678	3 240.8	376	1 450.4
1936-37	695	3 3 9 1	4 63	1 265.2
1937-38	766	3 661.5	374.3	1 293.9
1938-39	817	3 905.3	425.8	1 703.2
1949-50 approx	1,360	3 905	350.0	1 400

The conversion of yarn into cloth has been made on the basis of the old ratios 16 1 lb yarn = 4 yards cloth (in the case of handlooms) and 1 lb yarn = 478 yards cloth (in that of mills)

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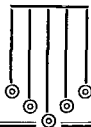
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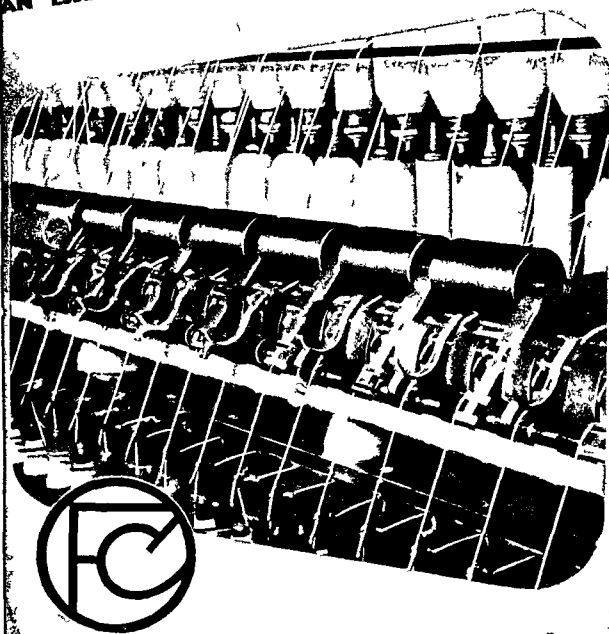
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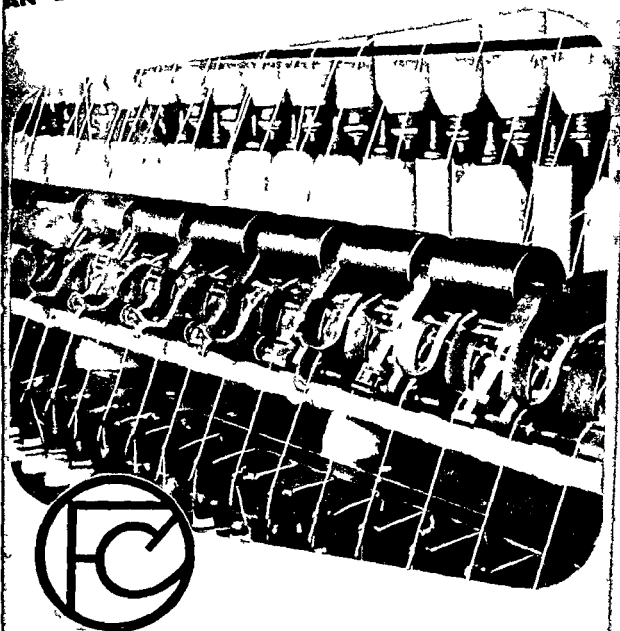
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By Dr. M. H. PATEL, M.A., Ph.D., LL B.

Early Beginnings

WHILE Bombay was busy in the erection of its first cotton mill in 1851, Mr Ranchhodlal Chhotalal, a contemporary of Mr Davar, was at the same time endeavouring to establish a cotton mill in Ahmedabad. According to the biographers of Mr Ranchhodlal, he conceived the idea of manufacturing cloth in Ahmedabad with the aid of machinery in about 1847. Indian capital was shy at the time and the people conservative. They would, therefore, not take risks in such a venture. When therefore Mr Ranchhodlal placed his project before the leading citizens of Ahmedabad, he received very lukewarm support. Mr Ranchhodlal was however not a man who would allow his plans to be dropped. He was a person of indomitable courage and vision. Besides, he was fortunate in obtaining help from one Mr Fulljames who, it appears, was much interested in this matter. The latter recommended the project to Messrs Bryn Duncan & Co, of London, and obtained quotations from them. The estimates were received in 1849 and were again placed before the wealthy people of Gujarat. It was clearly shown that cotton spinning and weaving would pay provided it was well managed. *This effort also failed to have response from the financiers*

But Mr Ranchhodlal refused to be discouraged. He continued his efforts and in 1851 he got an opportunity of bringing the project to the notice of Mr Landon, an American Industrialist, who further supported the project. In the meantime, the mills that were established in Bombay showed that the project had financial soundness. Encouraged by these examples, Mr Ranchhodlal stuck to his original project and the Ahmedabad Spinning and Weaving Mills was floated in 1859 and began working in 1861.

The difficulties in getting machinery and in erecting it were enormous. The first consignment of the machinery was lost on the way because of a fire on the ship. Fresh orders had therefore to be placed. The engineer who was specially engaged to erect the plant died before its arrival. There was no railway communication between Bombay and Ahmedabad at the time. The machinery had therefore to be landed at Cambay and brought to Ahmedabad in bullock carts. None of these difficulties however had the slightest effect on the undaunted spirit of the pioneer of the Industry in Ahmedabad. On the contrary, he supervised and guided the progress personally which was his special characteristic. The growth and development of the textile industry in Ahmedabad is a rightful fruition of this pioneer.

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A start was thus given for a new industrial life in the city. The progress however in the initial stage was rather slow. Only three new mills, viz Becharadas Madhowlal and Gujarat Spinning were started during the next 20 years

The position by 1890 was as follows —

Spindles installed	58 000
Looms	700
Capital (Paid up)	Rs 20 lakhs
Labour employed	2 000

During the period 1880-1900 the industry had to face many adverse factors. In the first place the closing of the mints in 1893 had disturbing effects on currency and exchange and therefore on trade and industry. The imposition of the three and a half per cent excise duty on cloth manufactured by mills was directly detrimental to its interest. The famine at the end of the century caused appreciable economic loss and dislocated business.

In spite of these adverse factors some twenty five mills were added during the period. It is probable that but for them the progress would have been more rapid. The position at the end of the last century was as under —

No of mills	29
No of spindles	4,58 000
No of Looms	8 700
No of operatives	10 000

1900-1914

The period 1900-1914 is important in the development of the Cotton Textile Industry in Ahmedabad. The imposition of the excise duty proved a boon in disguise. It roused national consciousness and there was a cry for support for indigenous industries. The Partition of Bengal in 1905 gave further impetus to the Swadeshi Movement. The Textile Industry appreciably benefited by this movement. The Russo-Japanese war of 1905-06 eliminated the Japanese competition for the time being from the Indian market. Favoured by these factors progress of the industry was rapid during the period as could be seen from the following figures —

	Spindles (1 000)		Looms (1 000)	
	1900	1914	1900	1914
Ahmedabad	458	688	87	260
Bombay	2 877	3 009	220	490
Rest of India	4 916	5 333	490	1040

It will be observed that the number of spindles increased by 40% and 20% in Ahmedabad and Bombay respectively, out of the aggregate increase of 8% for the whole of India. The number of looms increased by about 150% in the above cases. As a consequence of this rapid progress of Ahmedabad its spindleage increased to 13.5% and loomage to 20% of the all India figure. It attained a rank next only to Bombay in size and importance and it has succeeded in maintaining that position till today.

The period of 1914-28 for the Textile Industry may be called one of retarded progress. It presented a splendid opportunity for development and stabilization but on the whole the industry failed to derive the best advantage for obvious reasons. With the outbreak of the War in 1914 belligerents had to switch over from peace time to war economy. The productive resources were diverted in the production of munitions and other war goods. There was considerable contraction in production of consumer goods in those countries, and this gave a further impetus to the indigenous Cotton Industry. The dislocation offered a great opportunity to the Indian Millowners to extend their Cotton Trade. They were however, handicapped because of the fact that there was no machinery manufacturing industry. It was therefore not possible to instal new machinery to add to production to fill the gap created by the cessation of imports. The only course was to utilize the installed capacity to the maximum possible extent to increase production. The production of cloth by the Ahmedabad Mills which was 250 million yards in 1913-14 rose to 392 million yards in 1916-17 and stood at 332 million yards in 1918-19.

There was also a phenomenal rise in the price of cotton and cloth during the period 1914-19. The increase in production coupled with the rise in prices brought about huge profits to the industry. The mills in the city and island of Bombay utilized these profits in distributing liberal dividends as well as installing new machinery at high prices. Ahmedabad mills however, followed a more conservative

policy. They carried larger parts of profits to the reserves which in most cases were held over for purchasing new machinery at a later and more suitable date. The progress of the Cotton Mills was apparently more rapid in Bombay and other parts of India than Ahmedabad during the period 1914-28 which can be seen from the following table —

Spindles & Looms installed at the beginning of 1928

	Spindles installed (in lakhs)		Looms installed (000 omitted)	
	1914	1928	1914	1928
Ahmedabad	9.75	14.0	20.31	31
Bombay	30.19	31.67	49	75
Rest of India	67.78	87.02	104	167

The period 1928-38 is the turning point in the history of development of Cotton Textiles in Ahmedabad. It was a period of acute economic depression. It was marked by contraction of economic activity and a fall in the purchasing power. Under these conditions the major problem was to maintain production and profits to survive the crisis. In many cases this proved difficult and industrial units went into liquidation. Under the influence of these conditions the productive capacity of Bombay City considerably decreased. The Ahmedabad mills however had a different

Message from the Chairman, the Ahmedabad Millowners' Association

Dear Shri Gandhi,

I am glad to learn that you are bringing out a special publication, "The Indian Cotton Textile Industry Centenary Volume" to commemorate the first 100 years of the Indian Cotton Textile industry.

India today possesses the second largest Textile Industry in the world, ranking next only to U.S.A. and being one of our biggest national industries, it enjoys a unique place in our economic life. The industry has also vast potentialities for expansion.

I am confident that, like your publication, "The Indian Cotton Textile Industry Annual", the special publication will also prove interesting and instructive.

I heartily welcome the new publication.

Yours sincerely,
CHANDULAL P. PARIKH

experience They could substantially add to their spindles and looms which can be seen from the following figures —

	Spindles (in lakhs)		Looms (000 or mtd)	
	1939	1948	1939	1948
Ahmedabad	14.0	19.4	31	47
Bombay	24.7	29.1	75	66
Rest of India	8.0	100.2	167	200

It will be natural to inquire about the reasons which led to this rapid increase. It may be mentioned that the profits of the War period, unlike in Bombay, were allowed to be accumulated. This sound business practice has rightly received approbation from the first Tariff Board Report on the Cotton Textile Industry. These surplus funds were seeking an outlet for investment and only the textile industry had sufficient attraction for the local people. Other factors which encouraged investment in the industry were (1) removal of import duty on mill machinery, (2) removal of the obnoxious excise duty on production of cloth, (3) appreciated exchange which enabled them to import machinery at the advantage of 12½%, and (4) the Swadeshi Movement of 1930.

During the period 1938-41 four to five mills had to be taken into liquidation and scrapped as they were very old. During the period 1941-48, the industry enjoyed a short spell of prosperity. England and Japan two of the principal cloth manufacturing countries, were involved in the World War II. This eliminated competition in the home as well as other markets which were formerly being supplied by

them. Production increased to the maximum to meet this demand. There was also a phenomenal rise in prices. Profits were high but for want of availability of necessary machinery at home or from foreign markets, the industry could not increase its productive capacity. The position of the Ahmedabad Industry at the end of 1948 was as under —

No of Mills	74
No of Spindles	18.5 lakhs
No of looms	42,800
Paid up Capital	898 lakhs
Capital invested	Rs 2,500 lakhs

It will thus be observed that the textile industry in Ahmedabad has shown a remarkable progress during the century. From a rudimentary beginning of 2,500 throstle spindles, the industry has today almost 2 million spindles and 42,000 looms having capital investment of Rs 25 crores. It now represents as much as 25% of the productive capacity of the country. It has an excellent standard of production and has won admiration in the home as well as the foreign markets.

We may now refer to some of the other aspects of the history of the industry. It may be mentioned that the industry in Ahmedabad has passed through many vicissitudes but on the whole it has maintained satisfactory profits as can be seen from the following figures —

Period	Average profits per annum (in lakhs of Rupees)
1923-27	50.04
1928-32	51.84
1933-37	29.71
1938-42	161.45
1943-47	194.34

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Early information on the wage position is scanty. From the available information it is found that in 1880 the average wage was Rs 8 per month per worker. It was Rs 9.54 in 1903 and rose to Rs 13.99 by 1914. Since then wages in the Ahmedabad Cotton Mills have increased to a considerable extent. During the First World War wages of different departments were increased in different proportions. There was no uniformity of principle in the increase. As a consequence of these increases the average wage rate rose to Rs 35 by 1921. The condition of the industry changed thereafter and there was a uniform cut of 15.6% in June 1923. The average wage was thus reduced to about Rs 32.8. This position continued till about 1929. The Textile Labour Association then demanded a wage increase. As a result of arbitration proceedings, the wages of spinners were increased by 8% and those of weavers 5%. The average wage came to Rs 35 and continued till 1935. In view of the conditions of the industry, the Millowners demanded a wage cut of 25%. There were usual arbitration proceedings and the wages were reduced by 6 1/4% from 1st January 1935. The wages were once again increased by about 9% from 1938 as a result of the interim recommendations of the Textile Labour Inquiry Committee. This position continued till 1947, when with the fixation of the minimum wage and increase in wages of different departments at varying rates, the general wage level has increased by about 30%. The present average wage rate is estimated at Rs 45 per month and is the highest in the country.

During the Second World War and since then, the workers are receiving dearfood allowance according to the principles laid down by the Industrial Court. They have also been receiving annual bonus under awards or agreements varying from 20 to 37.5% of annual earnings. On an average, the rate of dearness allowance has been about Rs 65 per month. The aggregate average income, therefore, of a worker in Ahmedabad per month comes to about Rs 125. This is the highest wage paid to a worker in any Textile Centre in the country.

Ahmedabad is an internal town and suffers from some handicaps. Its sources of coal supplies are the fields of Bengal, Bihar, and the CP. They are hundreds of miles away. Freight charges therefore become very heavy and the industry has to carry larger stocks of coal than otherwise. The nearest port is Bombay, and the Industry has to obtain its machinery, spare parts and stores through this port. Freight charges again are heavy. The major competing centre of Bombay is favourably situated in both these matters. It obtains power from the hydro-electric system which is comparatively cheaper. It is estimated that the total disadvantage to Ahmedabad in comparison to Bombay on account of higher cost of power and the additional freight charges will work out at about Rs 3 to Rs 4 per working spindle or by about Rs 2 lakhs per mill per annum.

It will thus be observed that the Textile Industry in Ahmedabad has shown remarkable progress in spite of these various handicaps. It has also maintained satisfactory profit and is paying the highest wages. These facts are amongst attributable to (a) the structure of the industry, (b) quality of production, (c) efficiency of management, (d) efficiency of labour, and (e) cordial capital labour relationship.

Considerable addition has been made to the machinery since 1928. Machinery therefore is on the whole more up-to-date and efficient. Besides, following the recommendations of the First Indian Tariff Board, the mills obtained plant and equipment to manufacture fine and superfine cloth which till then was monopolised by foreign importers.

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experience They could substantially add to their spindles and looms which can be seen from the following figures —

	Spindles (in lakhs)		Looms (000 installed)	
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Rest of India	8.0	100.2	187	200

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They installed machinery for fine spinning. High speed machines for spinning, winding and warping were further introduced. Processing and finishing were mechanized and improved with the aid of improved machinery. Many of the mills installed machinery for four-colour printing as well as mercerization. In 1928, the production of Ahmedabad mills of yarn of counts 40s and above was 4 million lbs out of the total of 14 million lbs in India. During the year 1948 the production has increased to about 60 million pounds out of the total of 130 million by the Indian mills. The Ahmedabad mills produced about 300 million yards of coloured goods and 40 million yards of cambrics and lawns during the year 1948 and thus represented about 40% of the Indian production.

Management

The characteristic of the Ahmedabad mill management is personal supervision and economy. Unlike many other centres, the offices are situated on mill premises. This ensures economy in administration as well as better check. The Agents regularly attend the offices and go round the departments of the mills. The success of the industry to a great extent is attributable to this feature of the mill management.

Labour

Labour in Ahmedabad is also more efficient than elsewhere. Unlike many other centres about 50 per cent of the labour is locally drawn from the city and the district.

It is more stable and less migratory. It is also more homogeneous. The percentage of absenteeism is appreciably less. While the percentage is as high as 12 to 15 in Bombay, it is only 2 to 3 in Ahmedabad. As a result of these factors the production per worker is the highest in Ahmedabad. While average Indian production is about 500 yards per worker it is about 700 yards in Ahmedabad.

Capital labour relationship of the Ahmedabad Textile Industry is unique in India. Under the inspiring guidance of Mahatma Gandhi, the Father of the Nation, a system of voluntary arbitration was adopted as early as 1918 when the principles of labour organisation or of collective bargaining were unknown in this country. This achievement enabled the leaders of industry and of labour to resolve many major and minor disputes during the course of 20 years of its working. The bonus disputes from 1920 to 1923, the wage disputes of 1930 and 1935 and such others were amicably settled. It prevented loss of millions of man days, loss of wages to workers and loss of profits to the industry. With this spirit of co-operation it was also possible to accept the principle of rationalisation in 1935 as well as the introduction of standardization of wages in 1938 which in some cases meant a decrease in the wage rates. These measures have proved to be of mutual benefit to labour and capital. This method of co-operation is an example for adoption by others. At the present time the industry is passing through a crisis. But so long as this happy relationship is maintained there is reason to be sanguine that the industry will be able to continue its march of progress.

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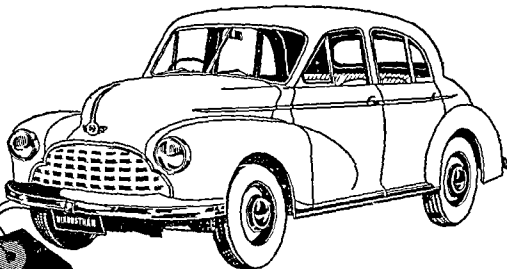
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THE COTTON TEXTILE INDUSTRY OF BENGAL

By SUBINOY BHATTACHARJEE, M.A.
Secretary, Bengal Millowners' Association

Ancient History

BENGAL'S claim to the manufacture of linen and a sort of fine white silk dates back to some three centuries before the Christian era. But we come across frequent references to the manufacture of the finest types of cotton cloth in Bengal in Kautilya's *Arthashastra* of about 400 B.C. It is widely believed that Egyptian mummies have been found wrapped in Bengal muslins. There is, however, no doubt that by the beginning of the Christian era the cotton manufactures of the country became widely known to the Greeks. Next, many references to cotton cloth are met with in the *Varaha Samhita*, i.e. about A.D. 600. It may incidentally be mentioned that even till about three centuries ago, cotton was comparatively unknown to the civilized nations of the West. In the ninth century, the Arabian traveller Sulaiman wrote: "In the Bahamani Kingdom (i.e. Eastern Bengal) such fine cotton fabrics are produced that a full sized cloth passes right through the hollow of a ring." Marco Polo in 1290, the English traveller Ralph Fitch in 1583, and Abul Fazl, the author of *Ain-i-Akbari*, referred to the famous cotton industry of Bengal in their works. It is known from their writings that at Sonargaon, Dacca, the best and finest cloth in India used to be produced in 1675-80, muslin used to be manufactured at Santipur, Makhish and Hooghly.

The famous muslins of Dacca at one time became the craze of the *elite* of society. The poetic names given to the different varieties give one an idea of their fineness: "*Ab-i-raivan*" (running water), *Baki Hawa* (made of air), "*Shab Nam*" (the evening dew) and so on. It is said of Aurangzeb's daughter that she was chastised by her father for being insufficiently clad although she had worn seven muslin garments one over another. Another anecdote says that a cow, while grazing, swallowed a full ten-cubit long *Abruyan* cloth which had been spread on grass to dry. The skill, patience and perseverance of the weavers who manufactured such extraordinarily fine cloth are indeed amazing. It is said that it took a weaver at least five months to produce such a fine piece of cloth and the spinner about two years to spin the necessary yarn. It is also believed that both the spinning and weaving had to be done during the hours of dawn before sunrise, by the side of a pond, in order to ensure a humid and cool atmosphere. Otherwise the yarn would break, so remarkably delicate was the yarn. It can, therefore, easily be imagined that the cost of such cloth was not inconsiderable. Even during the middle of the last century the price of *mulmul khur* was Rs. 10 per yard—that is to say, about Rs. 30 in the denomination of the present days. A piece of *Dacca jamdani* cost Rs. 450 and a piece of *Ab-i-jara* 5 yds. x 36 ins. cost Rs. 400. It was

possible for the industry to flourish under Mohammedan rule because of the patronage extended to it by the padshahs, nabobs and their courtiers. The lay public evidently could not afford to buy such expensive stuff.*

It is on record that Bengal used to export cotton goods in bulk quantities to France, Holland and England in 1657. But the Dacca muslin was first exported to England in 1666. By 1675 the fashion of wearing muslins, the costlier fabrics of Dacca, as well as the cheaper stuff from other parts of the country, became prevalent in England. This habit of the people expanded rapidly all through the last quarter of the seventeenth century till it began to excite the jealousy of the British manufacturers so much so indeed that Acts of Parliament had to be passed in 1700 and 1720 prohibiting the importation of certain classes of Bengal-made piece-goods into the United Kingdom. It may incidentally be mentioned that Bombay and Surat then used to send raw cotton to feed the Bengal looms, but it is on record that Dacca muslins were manufactured entirely out of the produce of the Dacca district.

The Decline

Although cotton textile manufacture was by far the most flourishing industry of the Province at the time, there is no reason to suppose that the people of the soil profited from it to any appreciable extent. Like Indigo, it was practically the monopoly of the East India Company, whose gomastahs (native agents) meted out abominable treatment to the local weavers whom they compelled to accept 'dadans' or advances. The price paid was so wretched and the terms of contract were so iniquitous to the weaver that they gave rise to the weavers' thumb story, which stated that the East India Company chopped off the thumbs of the weavers so that they might not ply an independent trade of their own. Or alternatively the weavers themselves cut off their thumbs to avoid being coerced into working for the Company.

A decline in French and Dutch commerce set in in 1759, and it finally collapsed during the troublous days of the French Revolution (1789-95). During the period 1771 to 1793 the East India Company exercised a quasi-monopoly over the export trade in cotton goods of Bengal. In the year 1772 alone, the Company exported cotton goods valued at Rs 70 lakhs (about Rs 1.25 crores at present-day denominations). But by that time the decline of the industry had already set in. A series of inventions in England during the latter half of the eighteenth century, e.g. Hargreaves' Spinning Jenny (1767), Arkwright's Water Frame (1768), Crompton's Mule Spinning (1775), Cartwright's Power Loom (1784) that is, the Industrial Revolution in England, gave the final death blow to the handloom industry of Bengal. There was a rapid improvement in the manufacture of British piece-goods which began to find a ready market in India through the East India Company, who had willingly reversed their process of trade. Of course, British imports of piece-goods into India were not really effective till 1813. It should be noted that at the time there was no sympathetic popular Government in the country to safeguard the indigenous industry of Bengal against the onslaught of machine-made imports.

British Policy and the Industry

Imposition of arbitrary, heavy and discriminatory taxes and duties on our industry characterised the British policy ever since this country came under British domination. An idea of how such taxes and duties imposed on the industry affected it, is gathered from the fact that the total excise duty levied on Indian mill-made goods from 1896 to 1925-26 a period of thirty years—amounted to the gigantic figure of Rs 22,28,39,150. This policy of repression and suppression of the industry followed by the British Government at the discretion and in the interest of Lancashire and Manchester, was taken serious notice of by even many British officials and non-officials. The great historian H. H. Wilson remarked—Had not such protective duties and decrees existed the mills of Paisley and Manchester would have been stopped at their outset and could scarcely have been set in motion by the power of the steam. They were created by the sacrifice of Indian manufacturers. Had India been independent, she would have retaliated and would have imposed prohibitive duties on British goods and would thus have preserved her own productive industry from annihilation. This act of self-defence was not permitted for she was at the mercy of the stranger, British goods were forced on her without paying any duty and the foreign manufacturer employed the arm of political injustice to keep her down and ultimately strangle a competitor with whom he could not have contended on equal terms.

The Revival

During the transition from the medieval to the modern age in the wake of the Industrial Revolution of the eighteenth century in Europe, many indigenous small scale and cottage industries in India succumbed to the onslaught of foreign competition, but the cotton textile industry which until then consisted exclusively of hand spinning and hand weaving not only survived by adapting itself to the changed conditions but actually entrenched itself firmly in the Indian soil.

The great revival came in the machine era. Few people know that the first cotton mill in India was started in Bengal in or about 1830 under European management and was called the Fort Gloster Mills. That mill is still in existence under the name of Bowreah Cotton Mills Co. Ltd., managed by Messrs Kettlewell Bullen & Co. Ltd. Even in later years, Bengal put up a fairly satisfactory performance in the race for establishing mills as compared with other centres of the mill industry in India. In 1873 there were 28 mills in Bombay as against 15 in Bengal. Later on however, Bengal slipped back and in 1931 there were 73 mills working in Bombay Island as against only 13 in Bengal. Since 1932, however, a new awakening has been discernible and in 1940, at the commencement of the last war, there were no less than 30 mills at work in Bengal with a complement of 9,940 looms and 4,44,196 spindles.

Present Position

The position of the industry in Bengal since 1940 to the eve of partition in 1947 can be gauged at a glance from the following table—

* Vide M. P. Gandhi's Indian Cotton Textile Industry—Its Past, Present and Future (1931)

Year	No. of mills.	Paid up Capital.	No. of Spindles.	No. of looms.	Production (in yards)
1910-11	33	9 69 31 804	4 58 816	10 815	200 170 687
1911-12	33	2,91 89 501	4 72,284	10 71*	194 430 396
1912-13					171 977 184
1913-14	34	3 61 48 917	4 81,206	10 861	211 151 460
1914-15	37	3 53 66 418	4 79 691	11 97*	210 085 748
1915-16	37	3 58 48 011	4 76 432	11 76*	209 488 175
1916-17	38	4 97 01,35	4 73 765	11 391	176 484,778

It will be noticed from the foregoing paragraphs that reference has all along been made to 'Bengal', that is, undivided Bengal of pre partition days. It is still difficult, if not impossible, for an average Bengali to speak or write of Bengal in terms of the present truncated State of West Bengal. In so far as past history is concerned it is only natural to refer to undivided Bengal of pre partition days but speaking of present position and future prospects, it is necessary to refer to the State of West Bengal. The position of the industry in West Bengal today is as follows —

Year	No. of mills.	Paid up capital.	No. of spindles.	No. of looms.	Production (in yards)
1915-16	29	4 11 54 187	3 93 909	9 070	1,0 m then yds. approx.

Prospects of the Industry in West Bengal

Turning to the prospects of the textile industry in this province, the first and foremost favourable factor that easily

occurs to one is the extent of the home market. A population of about 225 million people in West Bengal should normally require at least 450 million yards of cloth at the rate of 20 yards *per capita*, although West Bengal mills can at present produce only about 170 million yards of cloth. It will be seen, therefore, that at present the cotton mills in West Bengal cannot even meet a fraction of the total requirements of the State, not to speak of the wide market in the adjoining States of Bihar, Assam and Orissa, which largely depend on West Bengal for their supplies.

Bengal's proximity to the coal fields has also placed her in a most favourable position in so far as availability of cheap motive power is concerned. The humid atmosphere and moderate climate of the province are conducive to the development of the mill industry. Abundant supply of comparatively cheap labour within the province is a great advantage to the industry. A huge, more or less trained labour force, consisting of indigenous workers as well as workers recruited from Madras, Bihar, Orissa and Madhya Bharat has grown up in the vicinity of Calcutta, with the result that the mills round about the city do not have to suffer any dearth of labour supply. Moreover, the Bengalee worker, although physically a bit poorer and sometimes averse to factory work, is intelligent and possesses the requisite delicacy of touch and flexibility of fingers. The manual dexterity of handloom weavers bears ample testimony to this fact. Mere adaptability to factory surroundings and a sound training and experience should enable the Bengalee workers to become excellent operatives in cotton mills. It

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In this connection, the following remark made by the late A B Guha, a leading cotton millowner of Bengal, is highly significant and instructive—

"At one time Bombay was believed to be the natural seat of the cotton mill industry on account of its climate, proximity to market and the most important cotton producing areas and other reasons. Though cotton is grown, more or less, in many Provinces, nearly 75 per cent of the total crop is raised in Bombay, Central Provinces and Berar and Hyderabad State. But, in spite of these advantages, the share of the Bombay industry has receded, since 1908 from about 50 per cent of the total Indian production to 40 per cent due to the development of other centres like Ahmedabad, Sholapur, Madras, Delhi and Cawnpore. It is not our purpose here to discuss the relative advantages of these different centres, but we want to emphasise that the recent tendency has been for a wider distribution of cotton mills in spite of the geographical and other advantages of Bombay and Ahmedabad. A similar trend has been observed in Europe and the U.S.A. In the life history of an industry, centralisation has undoubtedly advantages, but, as time goes on it becomes a handicap. Wherever an industry is massed together, rents, taxes and cost of living go up, trade unions form, the machinery becomes old and obsolete, and inevitably new centres of production spring up, excessive concentration of population in limited areas also gives rise to difficult problems of sanitation and housing, and produces a lack of equilibrium between agriculture and industry in the country as a whole.

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Difficulties of West Bengal Mills

Whilst admitting that there are no inherent handicaps in the way of an all round development of the cotton textile industry in West Bengal, it is well to remember that there are certain problems of a very serious nature which must be tackled adequately before the cotton mills in West Bengal, existing or prospective, can hope to succeed in the long run. Speaking of difficulties, the first and the most vital one appears to be the problem of capital. It is not suggested for a moment that Bengal lacks the necessary capital, nor is it strictly correct to say that the average Bengalee fights shy of investing in industrial ventures. It is common experience that renowned industrialists find little or no difficulty in tapping the liquid capital of Bengal by issuing shares of industrial concerns to the people of this State, and even middle-class Bengalees have been found to subscribe shares in industrial undertakings guided and controlled by well known business magnates. It is only due to the undesirable growth of mushroom companies, and frequent company failures in recent years, that the prospective investors in Bengal have become somewhat cautious. Unless the management consists of persons with proved

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Closely connected with the question of capital is the economic size of a mill which can reasonably expect to become a profitable concern in the long run. In order to be successful in the face of intense competition from within, as well as from without, a cotton mill must have adequate resources at its disposal, not only for producing the goods economically, but for a satisfactory organisation of its market and for an extensive advertisement and publicity campaign for popularising its products. It has been estimated that an economic sized mill should have at least 500 looms and 25 000 spindles. Viewed from this standard, the number of economic units in West Bengal come to only four, and even amongst these four mills there are some which are equipped with old and worn-out machinery, and cannot hope to attain the requisite efficiency. It is needless to mention that smaller units are at a distinct disadvantage in the purchase of raw materials and stores and the sale of their finished goods. The overhead costs of a small mill are bound to be high, and it cannot afford to secure the services of a properly trained and highly paid technical staff. Moreover, the establishment cost and other expenses are proportionately much higher in the case of smaller units. A peculiarity of West Bengal is that there are no less than 14 non spinning weaving factories in this province which cannot be regarded as economic units, and being dependent on the market for their yarn requirements, they find it difficult to compete with composite mills having both spinning and weaving arrangements.

The financial weakness of the majority of the West Bengal mills prevent them from carrying on a systematic research work both in regard to efficiency schemes and vocational selection and industrial psychology with a view to increasing the output and diminishing the production costs. Rationalisation, in the widest sense of the term, is urgently called for if the cotton mill industry in West Bengal is to be placed on a sound foundation.

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Expansion Schemes

Under the post war expansion scheme, the total allocation of looms and spindles to the province of West Bengal was as follows —

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There have been some cases of cancellation and abandonment of expansion schemes which have necessitated the reallocation of the looms and spindles.

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One of the chief handicaps of the cotton mills in West Bengal is their situation at a very great distance from the chief cotton growing districts in India. While this in itself is not a guiding factor in the establishment of cotton mills, as exemplified by leading textile centres like Japan and the United Kingdom, at least at the initial stages this has its own significance. Bengal mills have to depend for their supply of raw cotton on Madras, Madhya Bharat and the Bombay State in India, or on Western Pakistan, Egypt, East Africa and America for better types of cotton. The best Indian cotton does not spin more than 30s counts or at the most 40s. For the production of finer goods, the West Bengal mills have to depend entirely on foreign cotton. Owing to the absence of fumigation facilities at the Calcutta Port, American cotton which is not allowed entry into the country without fumigation, has to be brought to Calcutta through Bombay. The West Bengal mills thus have to incur an additional cost by way of railway or steamer freight.

The import duty on foreign cotton, high freight charges and the uncertainties of supply during the international political disturbances, all point to the one conclusion that attempts should be made to grow the required types of cotton within the State so as to meet the requirements of the local mills. The cotton at present cultivated in West Bengal is not fit for use in cotton mills owing to the shortness of staple and lack of proper strength of the fibre. The last great war and subsequently the partition of the province and the problem of food shortage have dealt a severe blow to the endeavours made in the direction of cultivating better types of cotton in this State. In fact, the problem of cotton shortage and non availability of cotton at reasonable prices have been causing grave anxiety to the cotton mills in West Bengal.

Conclusion

If for no other reason, the cotton mill industry should be developed to its full stature in the State of West Bengal to combat the growing menace of unemployment in the State. An investigation into the conditions of employment in cotton mills revealed that the total number of employees including clerical staff in the industry is about 30,000, which means that nearly 1,30,000 people are directly dependent on the industry for their subsistence. It should be remembered that a great many people are also connected with the cotton mills in various other ways, such as brokers, cotton and mill stores dealers, shop-keepers in the mill areas, wholesale and retail dealers in goods produced by the mills and numerous other persons, who can find employment by an adequate development of the cotton mill industry in this State.

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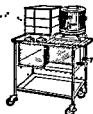
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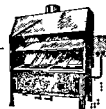
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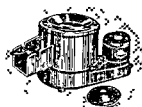
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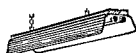
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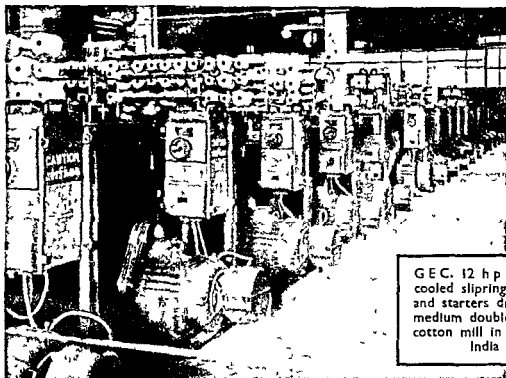
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Organization of Labour in the Indian Cotton Textile Industry

By

SHRI SHAMALDHAREE LALL, C.I.E., I.C.S.
Assistant Secretary-General United Nations
Organisation, Lake Success

* This article was contributed recently when Shri S Lall was Secretary Ministry of Labour, Government of India

ONE would be justified on the basis of the available facts, in making the claim that labour in the Indian Cotton Textile Industry has led the labour movement in India and has achieved results which have served as beacon light to employees in other industries and those in distant regions as well

Employment

Of the 176 lakhs of persons employed in 1947 in all factories in the Indian Union (excluding East Punjab) 6.3 lakhs or 36.1 per cent were employed in this industry alone. It is also of interest to note that in spite of the fact that several new industries have been established during the last quarter of a century, labour in this industry has not only continued to form the single largest group of factory workers but their proportion to the total has gone on increasing. Thus, while in 1923, of the total number of persons employed in all factories in undivided India, those employed in this industry formed 24.6 per cent, in 1947, the corresponding percentage was 36.1.

Bombay State, and particularly Bombay City and Ahmedabad, have always been, and continue to be, the most important centres of the cotton mill industry. Of the 6.3 lakhs persons employed in the industry during 1947, 4.0 lakhs or 63.5 per cent were employed in the Bombay State. Next in order of importance come the States of Madras, U.P., West Bengal and Madhya Pradesh which employed 91,440, 59,621, 30,286 and 29,118 cotton mill workers respectively during 1947.

Unlike other industries the Cotton Mill Industry contains a considerable proportion of women workers. If we go from North to South, this proportion seems to go on increasing. In 1947, out of the 6.3 lakhs workers employed in the industry, about 64,000 or 10.1 per cent of the total were women. It is noteworthy, however, that women's employment in the industry has not increased in the same proportion as that of men.

Despite many changes that have occurred in recent years, women's employment in cotton mills is still confined to certain departments and occupations like winding, reeling, sweeping, etc. Except in the Cochin State, women are generally not employed in the weaving department. It does not necessarily follow from this that Indian women do not make good weavers. Their continuing to work in certain departments only is merely traditional. In the weaving industries in the U.K., for instance, as against 27,510 male workers employed in 1945 the number of women workers was 69,390. According to an estimate, in Japan the proportion of women to men in the textile industry was 3.8 : 1.0. Similarly, in China, in the textile industry there is a preponderance of the women workers especially in silk and cotton factories.

It will thus be seen that the field of women's work is the subject of many differences of opinion and even of curious contradictions which give the student of social affairs cause for reflection. An half hour's trip by plane, and the crossing of an almost invisible frontier—and the notion of women's work appears in a completely new light, hardly a woman in the cotton spinning mills of Madras, but 52 per cent in the neighbouring State of Cochin and nearly as many in Pondicherry.

Recruitment

The composition of the labour force in the industry has remained more or less the same. But the outlook of the worker has definitely changed during the last quarter of a century. The cotton mill worker is no longer a bird of passage wishing to earn a few rupees in the City and going back to the village for the cultivation of his land. Many factors have brought about this change, not the least important amongst which is the increasing pressure on land and the gradual break up of the joint family system even in the villages. Moreover, the new generation of cotton mill workers has become so used to the amenities of city life

that they prefer to work in the cities rather than work on the land or be idle in the village

Although the composition of the labour force has remained the same, vast changes have taken place in regard to the methods of recruitment. If one looks back 25 or even 15 years and compares the position regarding recruitment then prevailing with what it is today, one would see a most striking change. Previously, when a mill wanted fresh recruits, they were either recruited by the jobber at the mill gates or he brought in his friends and relatives from his own village. As is well known, this method not only increased the power and influence of the jobber but led to any amount of corruption. All this has gone. The jobber *mukaddam* and the *sirdar* have been put in their right place and although in a few centres there may be a certain amount of nepotism, on the whole, it can be said that in most important centres of the industry there is little or no corruption in the matter of recruitment.

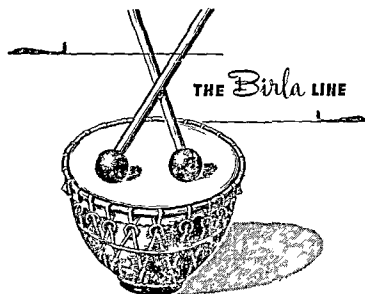
Largely, as a result of the recommendations of the Royal Commission on Labour in India, most mills have now appointed Labour Officers one of whose functions is to recruit labour to maintain proper lists of substitute workers and to investigate into all cases of corruption. In Bombay City the Millowners Association have themselves appointed a full time Labour Officer and the Government of Bombay, too have a senior Labour Officer to enquire into the day-to-day grievances of the workers and to ensure generally that no worker whether he is a fresh recruit or an old employee is allowed to suffer. I might mention here that the Government of Bombay have recently introduced a scheme for the decasualisation of labour in the cotton mills at Ahmedabad in co-operation with the Government of India who have made available the services of their Employment Exchange at Ahmedabad for the purpose.

Wages and Earnings

In spite of the fact that the workers in this industry were not too well organised they were the pioneers during the aftermath of the First World War in demanding and securing a dearness allowance which although it fell short of the rise in the cost of living, was much higher than could be obtained by workers in other industries in the country. Similarly also, during the boom succeeding the First World War cotton textile workers notably those in Bombay, were the first to demand and secure profit bonuses. During the last few years the average total earnings of workers in this industry is the highest in the country. In 1947, for instance, the average annual earnings of cotton mill workers in the Indian Dominion were Rs 911 as compared to Rs 498 in the jute mill industry and Rs 700 in the Engineering Industry. A State wise break up of the figure of average annual earnings of cotton mill workers in India during 1947 shows that on an average in West Bengal the workers were paid Rs 644 in Bombay Rs 1,041, in C.P. & Berar Rs 652 in Delhi Rs 894, in Madras Rs 670 and in U.P. Rs 708. Cotton mill workers have also been able to secure for themselves the highest basic minimum wage and the largest quantum of dearness allowance. In Bombay City the minimum wage both for men and women is Rs 30 in Ahmedabad Rs 28, in Sholapur Rs 26, in Kanpur Rs 30 and in Indore Rs 26. But more than the basic wage, the

highest quantum of dearness allowance which is generally linked with the cost of living index number is to be found in this industry. At one time the cotton mill worker in Ahmedabad was getting as much as Rs 74 per month by way of dearness allowance.

The workers in this industry have also been in receipt of the largest profit bonus. The highest amount of bonus in recent years was awarded by the Industrial Courts Tribunals, etc in 1948. Thus in Bombay and Ahmedabad which account for nearly 3½ lakhs of workers the bonus awarded during 1948 was equivalent to 4½ months wages. Other important industries, notably the jute industry, pay no profit bonus.



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A striking feature of most factory industries in the country for a number of years was that in the same centre and in the same industry the wage rates prevailing for the same occupation in different units were different. The Ahmedabad industry was the first to introduce standardisation of rates in certain departments. Recently very great progress in this matter has been made, due largely to the recommendations made by Industrial Tribunals or by *ad hoc* standardisation committees appointed by them. The position, therefore, is that in most of the important centres of the cotton textile industry wage rates have been standardised to a very considerable extent.

Trade Unionism

Among industrial workers in India cotton mill workers have been pioneers in the formation of trade unions. It is unnecessary to write at length about the great work that has been achieved by the Ahmedabad Textile Labour Association which was started by Mahatma Gandhi. The Ahmedabad Union was the first to accept the ideology of peaceful settlement of industrial disputes without resorting to strikes and of settling differences by conciliation and arbitration. There are at present about 158 registered trade unions of cotton mill workers with a membership of about 3.2 lakhs. This means that every second worker in a cotton mill is a trade unionist—provided, of course that the membership figures are correct. The statement below shows the number of registered trade unions of cotton mill workers and their membership in the various States—

State	No of Trade Unions	Members ¹ p
1 Ajmer and Merwara	2	3911
* 2 Bihar	2	200
3 Bombay	50	174,107
4 C.P. & Berar	22	37,072
5 Delhi	3	7,628
† 6 Madras	29	57,463
7 Orissa	1	140
8 U.P.	10	29,663
‡ 9 West Bengal	29	20,822
Total	158	3,21,008

* Membership is not known in 1 case

† Membership is not known in 8 cases

‡ Membership is not known in 3 cases

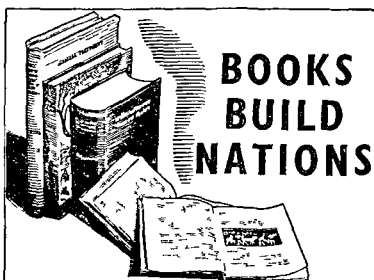
Welfare Activities

Governments, both Central and Provincial, have been assuming greater responsibility for the welfare of labour which was being looked after formerly by the employers. Unfortunately, since the outbreak of the last war, owing to difficulties of getting building material, equipment, etc., it has not been possible to register much progress in providing amenities to labour. All the same, in most important centres of the industry, provision exists for free medical relief, creches, etc. One of the war time developments has been the starting of canteens where light refreshments and snacks are provided and in some cases cooked meals as well. Some of the most notable examples of welfare work are to be found in the cotton mill industry. For instance, the mills in Delhi, Madras and Madurai provide an abject lesson of what an enlightened employer can do for the welfare of his operatives. The Delhi Cloth Mills have a Welfare Trust Fund to which every year the Company

credits 15 per cent of the profits. The housing colony provided by the Madurai Mills at Harveypatti is a model for any enlightened employer to follow and should serve as an eye-opener to those who still think of industrial housing in terms of back-to-back one room tenements.

A striking development which has occurred in recent years as a result of the awards of Industrial Tribunals is the institution of contributory provident funds in the industry in certain Provinces, notably in West Bengal, Madras and C.P. and Berar. In Bombay City about 40 mills pay retirement gratuities to their workers. It is however, unfortunate that the institution of Provident funds has not made much progress lately.

(Continued overleaf)



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The housing of industrial workers in India has always been a by word and a reproach. This is true also of cotton mill workers. The *chawls* of Bombay, the *ahatar* of Kanpur, the *cheris* of Madras and the *bustees* of Calcutta are too well known to require comment. Governments both Central and Provincial have been trying to do their best to improve the situation but the problem is so colossal that it will take years of patient work and considerable finance to solve it in a satisfactory manner.

Labour Management Relations

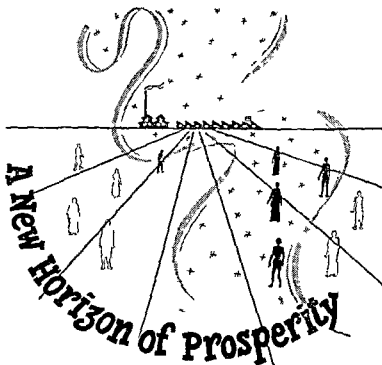
Since the adoption of the Industrial Truce Resolution there has been much improvement in the relations between the employers and the employed in this industry. Even so however there were during 1948-393 disputes in cotton, woollen and silk mills resulting in a time loss of 37.5 lakhs man-days. There is no doubt that in recent years the relations between the employers and employees in this industry have improved greatly but we are yet far away from the ideal relations of mutual goodwill and co-operation which should exist between masters and men. Such a transformation cannot be brought about overnight but this is an ideal well worth striving for. A striking example of what good results can be achieved given co-operation and goodwill on both sides is the successful experiment carried out at the Darwins group of factories in Sheffield where one could see democratic control, active participation in management by the worker, the trial ground for a great experiment in socialisation and the burial ground of sectional interest.

Trade Unionism in this industry has no doubt made rapid progress and the textile workers have been in the vanguard in the workers' movement in this country. Leadership from among the workers themselves is however still lacking although the last quarter of a century has recorded considerable progress. One of the difficulties in the workers choosing leaders from among themselves has been the fear of victimisation.

The trade union movement has however to be supplemented by the extension of the co-operative movement. Although co-operative societies are now to be found in several mills it is unfortunate that the co-operative spirit has not reached our masses. I can recall with pleasure the marvellous results of co-operation achieved by the employers and workers in the Harvey Mills at Madura both in regard to the housing of the workers and in regard to their other needs. In emphasizing what I have said about co-operation I could not do better than quote the following extract from an article by the Hon'ble Mr. V. L. Mehta, the Finance Minister of the Government of Bombay:

Co-operation is often treated as a branch of labour Welfare work. Actually, if viewed in its proper perspective and developed on correct lines it is much more than mere welfare activity. It constitutes a new way of life, it attempts to bring the interests of the individual into harmony with those of the community. Against the forces that make perpetually for disorder and conflict there is ranged a force which represents the desire and capacity of individuals and groups to

combine to serve a common end by the organisation of consumers and producers. On the basis of co-operation it is averred those elements which make for the emergence of a new civilization, governance by consent, tolerance and goodwill come effectively into play driving into the background the forces of violence, ill will and aggrandisement.



The successive extensions of the Bangasri Mills have added greatly to its production capacity. Before this there had been two extensions; at present the third one is nearing completion while the fourth is under contemplation. A new horizon of greater prosperity is thus being opened to all concerned. The consumers will have more clothes, the sons of the soil will have more employments, the investors will have more returns and the State will have more revenues.

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THE RAYON INDUSTRY OF INDIA

B₃

M. J. VADYA, B Com., F.R.Econ S., J.P.

THE Rayon Industry is of very recent growth, but all over the world today it connotes and includes the spinning as well as the weaving sections of the industry. But in our country Rayon Industry started as a Weaving Industry. The spinning Industry is now in the process of being established as a result of three factories having come into existence only very recently.

I will therefore first deal with the Rayon Weaving Industry which was started earlier. The three old established mills of which two were in Bombay and one in Calcutta and which were originally weaving real silk fabrics began to change over to rayon fabrics since the year 1930-31. A beginning was thus made nearly 20 years ago.

The very large import of rayon fabrics at very cheap prices from Japan in the subsequent years prompted the Government of India to levy a heavy specific import duty on these fabrics purely as a measure of increasing the revenue. The c.i.f. price of cheap quality Japanese Rayon Fabrics was as low in those days as 21 annas per yard. The levy of specific duty increased the landed cost to over 5 annas per yard. By this time a small beginning was made in Bombay by some enterprising Indian firms who had been trading with Japan in rayon fabrics upto that time by importing and installing cheap Japanese weaving and preparatory machinery and by weaving fabrics here out of imported yarn. The imposition of heavy specific duty acted as a protective measure for this infant industry and by the end of 1941 when Japan entered the war quite a few thousand looms had been installed in the country for the weaving of rayon fabrics.

The shortage of cotton textiles for civilian consumption during the war acted as a further incentive for the establishment of more rayon weaving units, and had it not been for the very restricted imports of rayon yarn during the war, this industry might have grown very much faster during the war period. However, as soon as the war was over and as soon as machinery and yarn became available from Japan and from Europe, there was a large increase in the number of rayon looms installed in India. The following figures give an approximate idea of the growth of the weaving industry.

Year	Number of looms installed
1931	1,000
1935	2,000
1940	5,000
1945	10,000
1949	15,000
1949	20,000
1950	25,000

It is estimated that over and above these looms which are installed in well-organised and mechanised factories, a large number of handlooms all over the country is also engaged at present on the weaving of artificial silk fabrics. Over and above these powerlooms and handlooms exclusively engaged in rayon weaving, quite a large number of looms (both handlooms and powerlooms) is engaged in the weaving of mixture fabrics or in the weaving of cotton fabrics containing some percentage of art-silk yarn for borders or for designs. Although no recent official enquiry has been held to ascertain the total number of looms working on art silk yarn in the country, I feel, it would be safe to state that in all more than 100,000 looms (including handlooms) are engaged in the weaving of rayon fabrics or of rayon mixtures in the country. The total weaving capacity of all these looms would, in my view, be more than 45 crore yards. It will be appreciated that this figure represents a very large percentage of the total cloth requirements of the country especially in view of the prevailing shortage within the country and the need for larger exports.

The total requirements in terms of rayon yarn for all these looms would be about 75 crore lbs. per annum and their value at the prevailing prices would be Rs. 225 crores, exclusive of import duty. The average price of rayon fabrics would be about Rs. 2 per yard. Therefore the value of the cloth woven in the country would be Rs. 90 crores. Thus, by spending foreign exchange worth Rs. 225 crores, we would be producing fabrics worth four times that amount. It is possible to export fabrics valued at more than Rs. 225 crores per annum to foreign countries and thus more than earn back the amount of foreign exchange which we may spend on the import of rayon yarn if the Industry is enabled to work to its full capacity.

Location of the Industry

The largest number of Powerlooms engaged on weaving of rayon fabrics is located in Bombay. Over 100 Mills or Factories containing more than 10,000 looms are to be found in the city and suburbs of Bombay. The remaining powerlooms are located at Amritsar, Ludhiana, Calcutta and in the States of Uttar Pradesh, Bihar, Hyderabad, Madhya Pradesh, Madras and Mysore. Next to Bombay, Bangalore is perhaps the most important centre of rayon weaving. As already stated, nearly 25,000 powerlooms are engaged in the weaving of rayon fabrics.

Types of Fabrics produced

During the 20 years of its existence, out of which 10 years may be taken as the real period of development (because there was no development during the war due to the absence of imports of machinery), the industry has made very great progress in the variety and quality of its products. In the initial stages only coarse and cheaper types of fabrics were manufactured. But today the industry manufactures practically all the varieties of rayon fabrics that are in demand in the country. Finer fabrics like Georgette, Crepe-de-chine and Ninon, heavier fabrics like Satin, Jacquard Woven Brocades, and cheaper fabrics like light shirting and Tafetta, of which the common variety is known as Shiraz, are now being manufactured by the Silk Weaving Mills located in the different parts of the country. It can now be stated that rayon weaving industry in the country is capable of meeting practically all the

requirements in quality, variety and quantity of rayon fabrics consumed in the country. It has, therefore, made the country independent of imported rayon fabrics.

Possibilities of Exports

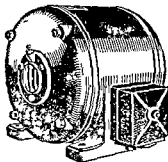
As already stated in the preceding paragraphs, the industry is capable of exporting fabrics valued at more than the total value of the imported yarn which it utilizes. With the growth of the spinning industry in the country, our dependence on foreign countries for rayon yarn will diminish and the industry should be able to export its fabrics in larger quantity and earn more foreign exchange for the country without having to spend any foreign exchange on the imported yarn. Even now the exports of rayon fabrics are progressively increasing and neighbouring countries like Ceylon, Burma, Malaya and East Africa are demanding rayon fabrics woven in India, in ever increasing quantities. In this manner the rayon weaving industry is very ably following the example of the cotton textile industry in establishing and maintaining markets for Indian goods abroad.

Rayon Spinning in India

It will be observed that we already have an established weaving industry in the country and thus a ready-made market has already been provided for the products of the rayon spinning industry. The first stage of the development of the rayon industry has already been completed and the second stage, viz. development of the spinning industry



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has also commenced with the establishment of three rayon factories which are respectively located at Perambavoor, Hyderabad (Deccan), and Bombay. It is stated that the capacity of all these factories is of the order of 15 tons per day or 450 tons per month or more than one crore lbs. per annum. It is thus apparent that in order to supply all the rayon yarn requirements of the country we need $7\frac{1}{2}$ times as much production of rayon yarn as is proposed to be achieved by the establishment of these factories. There is, therefore, scope for at least 15 more factories of the type that are under erection. In other words, if India can produce 40,000 tons per annum, she can be self sufficient in the entire field of the rayon industry.

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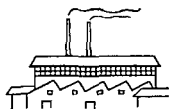
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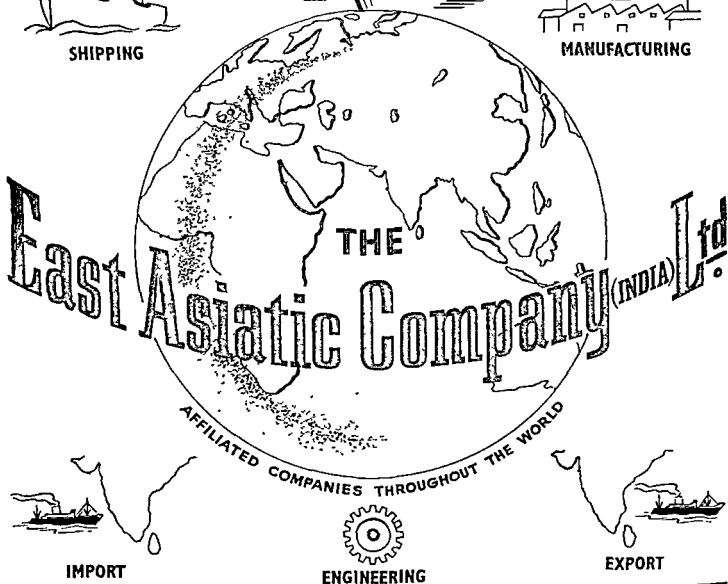
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in the history of the Indian Cotton Textile Industry (1700-1950)

- 1700 :** (William III, Chapter X, Act 11 and 12) An Act was passed prohibiting the importation of printed calicoes from India in Great Britain
This led to the importation of plain calicoes from India to be printed in England
- 1721 :** (George I C1) An Act was passed prohibiting the use and wear of printed calicoes and imposing a penalty of £5 for each offence on the wearer and of £20 on the seller of such goods in Great Britain
- 1771 :** (George III C72) The Parliament laid down that cotton goods for sale in England should be made wholly from cotton spun and woven in the country (i.e. England). Unless for exportation the import of Indian made goods was not permitted
- 1797-1813** Levy of duties in Great Britain ranging as high as 85 per cent on white calicoes, muslins, and the total prohibition of dyed and printed goods
- 1823 :** Levy of inland duty on Indian piecegoods at 7½ per cent till 1823 when it was reduced to 2½ per cent, while the imports of piece goods from Great Britain were charged a duty of only 2½ per cent
This had the desired effect of stimulating imports of piecegoods from Great Britain and the decline of the Indian Industry
- 1825-1832** Imposition of 10 per cent *ad valorem* duty on Indian goods in Great Britain
- 1835 :** Levy of 2½ per cent import duty on cotton goods in India
- 1843 :** Levy of heavy transit duties on Indian goods in India amounting to 17½ per cent
- 1846 :** Repeal of the 10 per cent duty in Great Britain
- 1859 :** Imposition of a general import duty in India of 10 per cent *ad valorem*, including piecegoods, cotton twist and yarn being subject to 5 per cent
- 1860 :** Duty on twist and yarn raised from 5 per cent, to 10 per cent *ad valorem* on the representation of the European Chambers of Commerce in India
- 1861 :** Import duty on cotton yarn reduced to 5 per cent, as the spinning mill began to grow and as it was thought that 10 per cent would give protection to the mills. The reduction of duty on yarn was certainly of advantage to the handloomists; the consideration of reducing the duty was the danger of the growth of spinning mills
- 1862 :** Import duty on cotton yarn reduced to 3½ per cent and import duty on piece goods reduced to 5 per cent
- 1871 :** Import duty on piecegoods 5 per cent and twist and yarn 3½ per cent. Export Duty on cotton piecegoods of Indian manufacture 3 per cent
- 1875 :** Tariff Valuation of imports of cotton goods lowered at the request of the Manchester Chamber of Commerce (total duty diminished by £85,000)
- 1875 :** 5 per cent duty imposed on import of Egyptian and American cotton in India, to prevent India from importing such superior cotton and competing with Manchester in her fine goods
- 1878 :** Import duty on raw cotton removed, exemption of coarse cotton goods from import duty. Sacrifice of revenue of more than a million pounds sterling
- 1882 :** Triumph of free trade, import duty on cotton piecegoods and yarn abolished in India
- 1893 :** Closing of the mints to silver, which dislocated the Indian yarn trade with China and Japan
- 1894 :** Import duty of 5 per cent *ad valorem* on imports of cotton piecegoods, import duty of 5 per cent *ad valorem* on cotton yarn of counts above 20s, and 5 per cent *ad valorem* excise duty on all machine made cotton yarn of counts above 20s manufactured in India
- 1896 :** Rate of import duty on cloth reduced to 3½ per cent
(1) All woven goods both imported and manufactured in India were to be taxed at the uniform rate of 3½ per cent instead of 5 per cent
(2) All yarn imported or manufactured in India to be free from duty
- 1906 :** Countrywide *Suadeshi* agitation

- 1910 .** Enhancement of the duty on silver in 1910 by the Government of India which was detrimental to the trade with the Far East. The use of Indian yarn in China was displaced by Japanese yarn. General tariff raised from 5 to $7\frac{1}{2}$ per cent, the duty on cotton manufactures remaining the same ($3\frac{1}{2}$ per cent).
- 1917-18 .** Import Duty on cotton manufactures raised from $3\frac{1}{2}$ per cent. Excise Duty remaining at 3 per cent.
- 1920 :** Rupee Pound ratio fixed at 2s per rupee in the teeth of strong opposition and the maintenance of which led to the frittering away of Gold Assets worth Rs. 78 crores. The ratio could not be maintained and ultimately the Government threw their hands up in despair in 1924 and abandoned the attempt.
- 1921-22 :** Owing to a deficit in the budget, General Import Duty raised to 11 per cent, import duty on cotton piecegoods raised from 7 per cent to 11 per cent. Excise Duty remaining at $3\frac{1}{2}$ per cent, $2\frac{1}{2}$ per cent import duty imposed on mill machinery and stores used in spinning and weaving.
- 1922-23 :** General tariff raised to 15 per cent, import duty on cotton remaining at 11 per cent and the Excise Duty at $3\frac{1}{2}$ per cent. Duty on machinery also at $2\frac{1}{2}$ per cent.
- 1922-23 .** Duty of 5 per cent imposed on imports of cotton yarn.
- 1925-26 :** Suspension of the notorious Excise Duty which was levied from the year 1896 on wards, with effect from the 1st December 1925, and its total abolition in 1926. This duty was imposed at the behest of Lanka and was continued in spite of strong opposition from all quarters. The Excise Duty was 'unreservedly condemned' by the Indian Fiscal Commission, in 1921-22. Total Excise Duty Levied on Indian Mill made Goods from 1896-97 to 1925-26 amounted to Rs. 22,28,39,150.
- 1927 .** Fixation of the Exchange Ratio at 1s 6d by obtaining majority of the votes in the Assembly. In their attempt to maintain it at any cost, Government had to resort to artificial contraction and manipulation of currency. Loss of Gold Assets frittered away for maintaining exchange at 1s 6d between April 1926 and November 15, 1930 amounted to 33 crores of rupees. The fixing of the ratio at this high level very adversely affected the industries of India as it virtually conferred a bounty on the foreign manufacturers at the expense of the Indian Industrialists.
- 1927 :** In the middle of 1927, the Report of the Tariff Board appointed to examine the question of granting protection to the cotton textile industry was published. Government imposed on imports of cotton yarn, in September 1927, a duty of 5 per cent or $1\frac{1}{2}$ anna per lb whichever was higher. This was a very halting measure and hardly proved of any assistance, except perhaps to the spinning mills.
- 1930 :** Duty on yarn continued till 31-3-1933. After several years of continued appeals by the Bombay and the Ahmedabad Mill owners' Associations for the grant of protection to the cotton textile industry which was in the throes of acute depression since 1923 and which suffered immense losses during the period, the Government of India passed an Act in April 1930 by which they increased the revenue duty on imports of cotton piecegoods from 11 per cent to 15 per cent generally, and imposed in addition a further 5 per cent protective duty on piecegoods not of British manufacture, with a minimum of $3\frac{1}{2}$ annas per lb on plain grey goods irrespective of the country of origin.
- 1933 .** Mody Lees Pact concluded.
- 1934 .** Indo-Japanese Trade Agreement concluded on 12th July 1934.
- 1936 .** Indian Tariff (Second Amendment) Act passed.
- 1939** Indo-British Trade Agreement signed on 20th March 1939. Indian Tariff (Third Amendment) Act, 1939, passed to implement the above Agreement. Protective Duties continued upto 31-3-1942 and later upto 31-3-1947.
- 1943 .** Control over cotton cloth and yarn introduced in June 1943 by the Cotton Cloth and Yarn (Control) Order, 1943.
- 1947** Protective Duties allowed to expire at the end of March 1947 after a tariff enquiry in 1947. Protective Duties on cotton cloth and yarn were converted as revenue duty with effect from 1st April 1947.

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- 1949 :** Protective Duties discontinued from 1st April 1947, except on piecegoods of art silk and of cotton and art silk mixed. Duties on art silk piecegoods will continue till the 31st March 1951. Regime of protection to the Cotton Textile Industry against imports of cloth and yarn which commenced in 1927, ended on 31st March 1947.

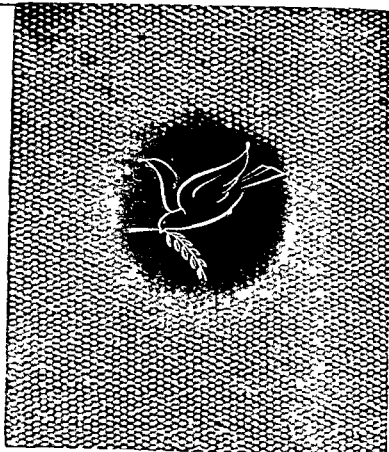
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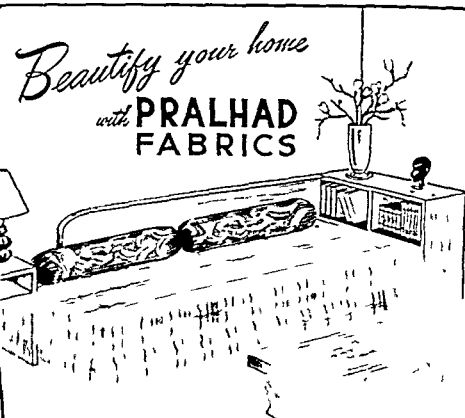
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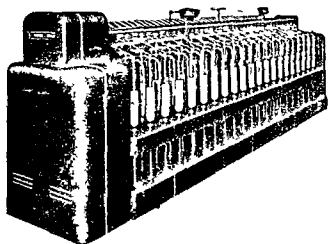


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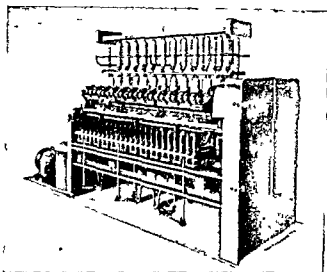
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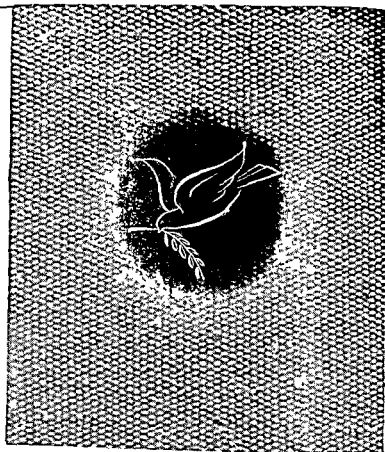
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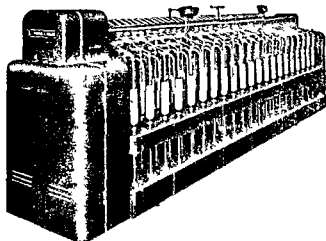
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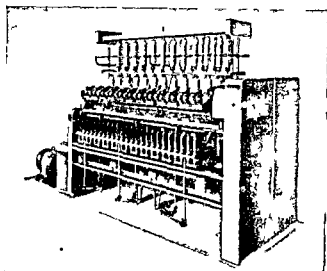
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- ★ That the productive capital employed in the Cotton Textile Industry in 1947 was Rs 132 crores, Rs 52 crores being fixed capital, and Rs 80 crores being working capital. Of these Rs 52 crores, Rs 20.5 crores represent land and buildings, Rs 30 crores plant and machinery, and about Rs 1.5 crores other fixed assets. Of the Rs 80 crores productive capital, Rs 58 crores represented stocks of raw material and fuels, and Rs 22 crores stocks of products and by products.
- ★ That the industry employed nearly 7,00,000 workers, of whom 99% were directly employed by factories, and 1% were employed through contractors. Of these 4 lakhs were employed in Bombay, 93,000 in Madras, 60,000 in Uttar Pradesh, and 32,000 in West Bengal. The number of women was 67,000—roughly 10% of the total labour force.
- ★ That the total number of man hours worked in 1947 was 1,55,00,00,000. The total salaries and wages (including bonus and other cash payments) of workers (men, women and children) amounted to Rs 59 crores, of which Rs 54 crores were received by men, Rs 4.7 crores by women, and Rs 7 lakhs by children. The total amount received by workers was as follows: Bombay Rs 41 crores, Madras Rs 6.3 crores, Uttar Pradesh Rs 4.1 crores, Baroda Rs 2.2 crores, and West Bengal Rs 1.96 crores.
- ★ The amount of coal consumed by the industry was 14,00,000 tons (value Rs 4.36 crores), firewood 10,00,000 tons (value Rs 13 lakhs), and fuel oils 4,07,00,000 gallons (value Rs 1.27 crores). The amount of electricity consumed was 77,00,00,000 kWh (Rs 2.5 crores), water 390 crores gallons (Rs 32 lakhs) and lubricant oils 21 lakhs gallons (Rs 60 lakhs). The value of total fuels etc. was Rs 9.27 crores.
- ★ The total amount of basic materials consumed was as follows: Cotton amounted to 33 lakhs bales (Rs 100 crores) of which 15.4 lakhs bales were 27/32 and below, 10.2 lakhs bales were 7/8 to 1", and 7.4 lakhs bales were long staple over 1". Of these, 19.8 lakhs bales were consumed in Bombay, 5.33 lakhs bales in Madras, 3.45 lakhs bales in Uttar Pradesh.
- ★ The amount of cotton yarn consumed was 202 crores pounds, and artificial silk yarn consumed was 12 lakhs pounds. The total amount of yarn consumed was 218 crores pounds (Rs 5 crores).
- ★ The tallow consumed was 60,000 cwts (Rs 47 lakhs), China Clay 64,000 cwts (Rs 5 lakhs), Sodium Hydro-sulphate 18,000 cwts (Rs 21 lakhs), Caustic Soda 6,500 tons (Rs 24 lakhs), Soda Ash 4,000 tons (Rs 20 lakhs), Bleaching Powder 77,000 tons (Rs 15 lakhs), Common Salt 3,89,000 maunds (Rs 27 lakhs) (Rs 9 lakhs), Sulphuric Acid 39,000 tons (Rs 6 lakhs), Starches (all combined) 33,000 tons (Rs 3 crores), basic and direct colours 3,000 sulphur colours 6,000 cwts, Vat Indanthrene 10 Naphthol Colours 8,500 cwts, the total quantity of dyes consumed being 20,000 cwts (Rs 3 crores).
- ★ The number of pickers consumed was 11,000 gross (Rs 47 lakhs), Bobbins and wooden bobbins 34,70,000 (Rs 1.8 crores), Shuttles 6,500 gross (Rs 1.6 lakhs), Heads 23,00,000 (800 eyes) (Rs 60 lakhs), Reeds 4,63,000 (1,000 dents) (Rs 19 lakhs). The total ex factory value of materials consumed by the industry was Rs 126 crores.
- ★ The total production of yarn, whether for sale or for further manufacture was as follows in 1947:

Upto 30 counts 31 to 50 counts 51 to 80 counts Over 80 counts the total being	83 crores lbs 22 crores lbs 8 crores lbs 3 crores lbs 113 crores lbs
---	--
- ★ The total production of woven piecegoods for sale in 1947 (excluding products used in the factories) was 314 crores yards, or 71 crores lbs. The total quantity of piecegoods sold and delivered during 1947 was 70 crores lbs or 308 crores yards.
- ★ The total ex factory value of woven piecegoods sold and delivered in 1947 was Rs 181 crores, and of all products and by products (including woven goods other than piecegoods, hosiery, thread, cotton waste, etc.) was Rs 243 crores. Of the total production of piecegoods, 44.8% was grey, 51% fancy, 4% prints.
- ★ Over a third of the total output of piecegoods consisted of shirtings and longcloth, over a fifth of dhories and over a seventh of saris. Figures given above for 1947 exclude Madhya Pradesh, Hyderabad, and certain districts of the United Provinces. The Textile Commission's figures for India.
- ★ The percentage of dust in the manu- of I dust is 43%.
- ★ 5% of the pro- employed the census Gc.

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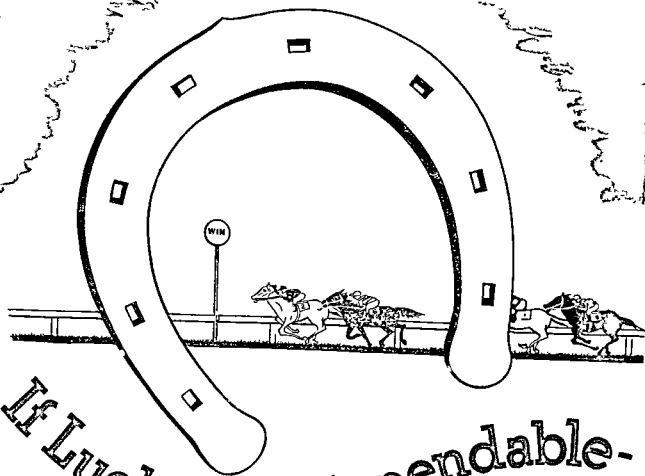
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SURVEY OF THE COTTON TEXTILE INDUSTRY'S POST-WAR PLAN FOR EXPANSION

The total spindleage involved in the expansion of the Cotton Textile Industry, including spindles covered by licences granted for orders placed prior to the publication of Government of India Resolution No 205-TA/45 dated 4th May 1946 on the Post-War Plan comes to 310 million spindles approximately. Although imports of spinning machinery were licensed to the extent of about 2.57 million spindles the pace at which progress has been made with the actual implementation of the Plan has not been as satisfactory as one might have expected commensurate with the licences issued. To begin with orders were heavily booked with the UK manufacturers and deliveries offered were of necessity long drawn out the source of supply being restricted. After the Indian Trade Delegation visited Japan in 1947 and the first hundred thousand spindles were booked by Government with the Japanese manufacturers offers for further supply of machinery through trade channels were received and accepted. Many of those who had provisionally booked their orders with the Indian Textile Engineers Ltd, the local representatives of the Textile Machinery Manufacturers in UK, then turned to Japan. The Indian Textile Engineers consequently considered it necessary to obtain an advance from those who were willing to book firm orders so that a more realistic programme of deliveries could be offered to the licensees and an order of priority made out on the first come-first served basis. This resulted in bookings with UK dwindling, partly owing to earlier deliveries being offered by Japan and partly because the prices for Japanese machinery were more attractive.

Capital being shy, many of the entrepreneurs found the problem of raising finance very difficult and were, therefore, unable to finalise their contracts for the purchase of their machinery while others appeared to be optimistically looking forward to a fall in prices. On the other hand, with the devaluation in September 1949, the unfavourable exchange rate has caused a further lull in the trade activities with Japan. The prospects of reduction in prices that our new industrialists had ardently hoped for not being likely to materialise in the near future, we are being treated to the uninspiring spectacle of many a wary promoter still continuing to be sitting on the fence, a perch from which the State Governments would appear to be chary of removing them owing to their inability, apparently, to find new promoters who are likely to do any better. While these are some of the reasons for the lackadaisical attitude on the part of the entrepreneurs chosen by Government to go ahead with their project under the Post-War Expansion Scheme, the Government policy adopting the Tariff Board recommendations on the Indian Textile Machinery Manufacturing Industry and the interim imposition of a ban by the Ministry of Commerce on imports of ring frames caused a further setback to the progress of the Plan.

Shortage of Cotton may well be cited as one more reason for the misgivings of the promoters with regard to the future and the implementation of the Plan being retarded to some extent. The unproved trade relations with Pakistan should, however, ease the situation in due course, as the promoters should be well assured of their share of imported cotton. Further, the disturbed equilibrium of the economic conditions of the Punjab and West Bengal have contributed not a little to stagnation in these regions.

With the merger of the States it has been difficult to clearly demarcate the distribution of spindles. The accompanying statement is an attempt at the nearest approximation of allotments made to the various Provinces and States (vide Table 'A') and a general review is given herebelow against each group.

This is a deficit zone. There is not a single mill to supply cloth and yarn to the people of the Province. Against an allotment of 1,00,000 spindles for Assam, the State Government planned to install 75,000 spindles under their sponsorship. Priority assistance was given by Government for the early

PROGRESS
RETARDED
BY
ABNORMAL
CONDITIONS
SINCE
PARTITION

A S S A M

delivery of 25 000 spindles but it now transpires that they are unable to undertake the project. They have asked for assistance for the transfer of the machinery to some other party. The position with regard to Assam is, therefore, nebulous and uncertain.

There are only two mills in this State. An allotment of 2,43,000 spindles was made including 25,000 for Seraikela State and the *ex-gratia* allotment of 5,000 spindles in favour of Buxar Central Jail. Buxar Jail have received their machinery out of the quota of spindles that the Government of India had ordered from Japan. Of the rest of the entrepreneurs who are not likely to implement the Plan, the Government of Bihar have recommended cancellation of 1,50,000 spindles allotted to six of the promoters. These are available for redistribution.

BIHAR

Surat Textiles Ltd., a new mill of 10,000 spindles granted under Automatic Registration and another at Navsari of 19,000 spindles are the only new mills which have come into existence in Bombay. Four new units of 12,000 spindles each were allotted for the purpose of ensuring yarn supply to handloom centres. None of these promoters have taken any action. With the merger of Palanpur, Baroda and Cambay, Bombay's share of the allotment of spindles under the Plan comes to 458 156. Some of the existing mills are, however, likely to utilise their allotments for expansion to the extent of about 50 per cent of the spindles distributed to them. Under the recommendations of the Government of Bombay, cancellations of spindles earmarked for expansion of existing units have been carried out to the extent of 17 000 spindles.

BOMBAY

Five new mills comprising 1 01,000 spindles and expansion of the 3 existing units to the extent of 20 760 spindles were sanctioned out of a total spindleage of 1,51 000 allotted in favour of Madhya Pradesh. In the present state of financial stringency the State Government are of the opinion that it is a matter of great doubt as to whether the new mills are likely to come into existence in the near future. They are not confident of being able to find alternative promoters to undertake the responsibility of setting up new mills in Madhya Pradesh. The *laissez-faire* policy of the State Government is, therefore, not likely to lead to any fulfilment of the aspirations of the Post-War Plan in this region.

MADHYA PRADESH

No regular allotment was made under the Plan for Delhi. A mill of 25 000 spindles styled the Swatantra Bharat Mills and sponsored by the Delhi Cloth Mills has, however, come into existence. This was booked under the Automatic Registration prior to 23rd December 1944. Basheshernath and Co and Ajudhya Textiles were subsequently given 20,000 and 12,000 spindles respectively, the former of whom has applied for an import licence for a small reconditioned plant from U.K. The Chief Commissioner, Delhi, is not hopeful of any further progress being registered in this area for the time being.

DELHI

Out of a total quota of 2,46,508 spindles allowed after partition, only 81,300 spindles have so far been distributed. As already stated, owing to the disturbed state of the economic condition of this State on the border of Pakistan, the Provincial Government seems unable to predict the future of the Post-War Plan as far as their promoters are concerned. It may be necessary to consider the possibility of transferring the unallotted spindles to the pool for distribution, later, to other States who may be in a position to show more tangible progress in the sphere of industrialisation.

EAST PUNJAB

Although at the outset the Government of Madras seemed chary of accepting spindles allotted to the State for industrial expansion, they have made considerable progress after the initial state of inertia. Madras have received a total quota of 4 81,000 spindles including the Pudukottah State and the spindles allotted under Automatic Registration. As many as 1,61,000 spindles have already been installed and a further quota of 76,220 spindles are expected to be erected this year. It might be said to the credit of Madras that more than 50 per cent of the sanctioned spindleage is expected to be utilised.

MADRAS

Orissa's quota is 1,44,000 spindles which includes Mayurbhanj State. Messrs Mayurbhanj Spinning and Weaving Mills have imported a reconditioned plant of 10,000 spindles from U.K. Messrs Orissa Textiles Ltd. have placed orders for 45 000 spindles, out of which 19,000 have been received and erected. A further list of 10,000 spindles is expected during 1950. The other promoters are like their neighbours in Bihar indifferent, and the Orissa

ORISSA

Government have attributed this to the difficulty of raising capital and it appears doubtful if the rest of the new mills are at all likely to be set up

Out of a total quota of 2 72 000 spindles allotted to Uttar Pradesh only 2 21 720 spindles were distributed 66 300 spindles for expansion and 1 55 420 for new mills Amongst those who are taking action for the expansion of their units are —

- (i) Cawnpore Textiles Ltd Kanpur
- (ii) Lakshmuratan Cotton Mill Kanpur

The only new mill that has come into existence in this region is that of Modi Spg and Wvg Mills at Modinagar (Meerut) This is sponsored by the well known industrialist Shri G M Modi who has imported and installed the first of the units of the spinning machinery of the H & B Machine Co of America the Indian Agents of whom are Messrs Mahindra and Mahindra Ltd Bombay The second plant of this kind imported from USA is under erection in Devarangere in Mysore State

UTTAR PRADESH

A quota of 2 94 612 spindles was allotted to the share of West Bengal after partition This includes the *ex-gratia* allotments No appreciable progress has been made by the promoters of the new mills as compared with Bengal Government's clamour for increased allotment Messrs Kalyan Spg and Wvg Mills have put up a plant of 12 000 spindles (second hand) purchased from Ahmedabad Under expansion Bangeswari Cotton Mills and Rampooria Cotton Mills two of the existing units have imported and installed 8 000 and 2 000 spindles respectively The Annapurna Cotton Mills D N Choudhury Cotton Mills and Bengal Fine Mills were allotted 9 200 8 200 and 13 500 spindles respectively from out of the quota of spindles purchased from Japan under Government account and all these spindles have since arrived The State would however appear to be in the throes of financial distress consequent upon the difficult times they have been passing through as a result of the partition of the country and its aftermath particularly the problem of refugees from East Bengal since May 1950

WEST BENGAL

An allotment of 30 980 spindles was made for new mills to be installed and old mills to be increased in size under the Plan Padmavati Rajee Cotton Mills Nagde is the only new mill of 19 000 spindles that is coming up

MADHYA BHARAT

Owing to uncertain conditions as in the case of Punjab and West Bengal the promoters in this region have displayed no sense of keenness in taking any active interest in the Post War Plan Messrs Shamji Karamsi Nabha and New India Industrial Corporation Patiala have actually abandoned their plans Messrs Karamchand Thapar and Sons have however been further allotted 19 000 spindles to enable them to increase the size of the mill they are putting up at Kapurthala which will now be one of 44 000 spindles 17 600 spindles are expected to arrive in 1950 Apart from this mill there is little chance of any other mill being installed in the near future in this zone There will therefore be a balance of 50 000 spindles available for appropriation

PEPSU

A quota of 25 000 spindles was assigned to this State but has since been cancelled

BHARATPUR

The total number of spindles allotted under the Post War Plan for new and existing mills in this area is 1 17 776 Apart from the existing mills which are likely to utilise the spindleage allotted in their favour for expansion there is no sign of any promoters of new mills taking energetic action for the implementation of the Plan Jaipur Spg and Wvg Mills have since transferred their licence for 10 000 spindles in favour of Binod Mills Ujjain They have an additional quota of 10 000 spindles which they expect to utilise themselves

RAJASTHAN

A quota of 90 796 spindles has been allotted to Saurashtra Although the State Government clamoured for an increased allotment hardly any of the existing promoters have taken any concrete measures to utilise the spindles allotted to them One of the new allottees Khetani Industries however appears to be very keen on putting up a spinning mill of 12 000 spindles at Rajkot They have previous mill experience as they had a small spinning mill in Ahmedabad for a number of years This unit is now idle and they propose to transfer it to Rajkot and build around it to increase the size of the mill to 12 000 spindles The question of transfer of the Ahmedabad Unit to Saurashtra is under consideration with the Bombay Government

SAURASHTRA

VINDHYA PRADESH

Only one mill of 25,000 spindles was sanctioned to this area in Rewa in favour of Asoka Textiles and Industries Ltd. The State Government do not appear to entertain any hopes of the promoter making good nor have they been able to select another party to take their place.

TRAVANCORE & COCHIN

1,04,033 spindles is the share of the United State of Travancore and Cochin. Of the total, only 83,033 spindles have been distributed. In Travancore, a mill of the name and style of the Balarama Varma Textiles of 12,000 spindles has been installed. A further lot of 2,640 spindles is expected to arrive this year. The other spindles utilised are—

- | | |
|-------------------------|----------------------------|
| (i) Vijaya Mohini Mills | 6 400 spindles (New) |
| (ii) Alwaye Textiles | 5 000 spindles (Expansion) |

In Cochin, the Cochin Mahalakshmi Mills comprising 2,500 spindles, has been established.

HYDERABAD

A quota of 95,624 spindles was allotted to Hyderabad under the Post-War Plan. No progress has been made by any of the promoters. This stalemate is doubtless due to political changes in the State and the uncertainty that prevailed during the change over. It is possible that the existing mills may, in due course, take action in the matter of balancing and/or expanding their existing units. MSK Mills Gulbarga, have purchased from Government a unit of 8,000 spindles which were imported under Government account.

MYSORE

Including an *ex-gratia* allotment of 17 200 spindles, the total quota for Mysore comes to 71 136. Three new mills have come into existence in this area, i.e. —

Kapala Textiles	15 000 spindles
Shri Ganesar Textiles	17,200 spindles
Sri Sankara Textiles	17,800 spindles

Mysore may well congratulate itself on the progress it has made.

As many as 14 new mills were sanctioned prior to the drawing up of the Post-War Plan, out of which only six have come into existence. Some mills have sprung up under the provisions of the April 1947 Notification in which the Government of India sought to encourage new-comers who produced evidence of their ability to import new or second-hand reconditioned machinery outside the quota on the basis of which they were sanctioned *ex-gratia* allotments.

Twenty-one of the existing mills have implemented their programme of expansion which involves the addition of 1,39,612 spindles. The new mills established already and those which are expected to be erected during 1950 are 43 in number comprising a total of 5,04,560 spindles. There is still a balance of 5,27,458 spindles remaining to be reallocated (vide Table 'A' on the next page).

SUMMARY

REVIEW

OF

EXPANSION

If the protagonists of the Post-War Plan for the expansion and rehabilitation of the Cotton Textile Industry had envisaged the consummation of the Scheme within a period of 5 years, as they would appear to have done, they would doubtless be somewhat disappointed at the results. The above factual review reveals that there is yet a lot of ground to be covered and it may take a long while still for the fulfilment of the Plan to be accomplished. Although there is nothing to enthuse over, considering that the plan of expansion was conceived before partition, under normal conditions, and that radical changes have since taken place in the economy of the country to upset all calculations, the progress made cannot, at any rate, be described as insignificant.

As the expansion aimed at the target of production of 1,700 million yards on the basis of the increased spindleage provided for, so as to ensure the per capita consumption of 18 yards, it is clear that the Plan should at all events be carried out to its finality. As a result of the war, and the devaluation of our currency, in September 1949, we have found a world-wide market for export of our textiles. With the expansion of our export trade, therefore, it is all the more necessary that India should take suitable measures to implement the programme for expansion of her cotton textile industry at an early date.

(See Table & Graphs on opposite page)

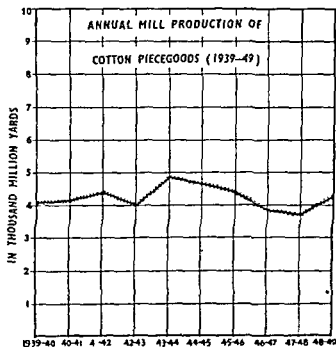
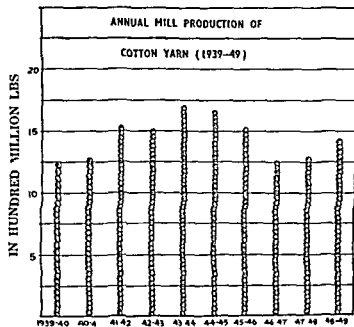
INDIAN COTTON TEXTILE INDUSTRY—CENTENARY VOLUME

TABLE A

Existing and Projected Spindleage Capacity of the Cotton Textile Industry in India (1950)

STATE	Installed Capacity		Quota Sanctioned under the Plan including Automatic augmentation & extra quota allotment	Quota allotted to mill promoters	No. of Spindles expected to be utilized	New spindles started since revised unit or erected	Spindles expected during 1950-51	Balance Spindles available for redistribution
	Spindles	Looms						
Assam	—	—	1 00 000	1 00 000	25 000	—	25 000	—
Bihar	27 797	745	2 43 000	93 000	43 000	—	5 000	1 50 000
Bombay	58 12 687	1 30 678	4 08 150	4 41 155	2 51 572	46 000	15 000	17 000
Madhya Pradesh	3 61 748	6 875	1 51 000	1 21 50	79 888	—	10 000	23 010
Delhi	13 896	3 131	67 000	57 000	25 000	25 000	—	—
East Punjab	37 434	752	2 45 808	81 300	10 000	—	—	1 85 208
Madras	16 05 390	63 3	4 81 000	4 80 270	2 78 960	1 61 000	76 220	730
Orissa	—	—	1 44 000	1 44 000	94 000	19 000	20 000	—
Uttar Pradesh	7 35 405	12 133	2 7 000	2 21 790	82 830	23 000	—	50 250
West Bengal	3 78 660	7 690	2 94 612	2 94 612	2 78 476	27 000	68 000	—
Madhya Bharat	3 93 578	10 414	30 980	30 980	30 980	—	—	—
PEPSU	—	—	94 000	41 000	—	—	17 600	60 000
Rajasthan	53 320	1 234	1 17 778	1 17 778	52 09	—	10 110	—
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Travancore & Cochin	73 262	7 6	1 04 033	83 033	53 000	28 000	2 610	21 000
Hyderabad	1 18 420	2 457	95 674	76 621	26 624	8 000	—	19 000
Myore	1 63 750	23 7	71 138	71 138	67 336	60 000	—	—
Nagpur	—	—	25 000	—	—	—	—	23 000
Grand Total	100 44 418	188 454	31 01 621	25 74 103	14 54 562	3 88 500	2 56 012	5 27 434

The graphs below show India's annual production in terms of cotton yarn or piecegoods



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Looking Forward . . .

HARDLY any industry in the world's history has had to face at its first centenary a combination of crucial problems such as now confront the Indian Cotton Textile Industry. It is true, looking back over the history of the past hundred years one cannot help feeling amazed at the substantial achievements of Indian industry. Time was when imported cloth was the commonest clothing and the patronage of Indian goods required a heroic effort at self-abnegation. Self-sufficiency in cloth was but a dream, nebulous, distant and visionary. Men dared not think of exports of Indian cloth, except in fond and feeble remembrance of a bygone age. Now all that is gone. Though we do not ban imports today, it is not that we cannot do without them. We may not have a plenitude of Indian cloth, and memories of acute war time shortage linger uneasily in our minds. But we have enough to make the stocks go round. And as for the foreign markets, men do not swear by Indian cloth. Indeed, it is said that sometimes they swear at them. But India is one of the three biggest exporters of cotton goods today, vying with the United States, and the United Kingdom, and leaving Japan, at the moment at any rate, far behind. The prospects of further indefinite projection of these trends are by no means negligible. Ignoring problems which, as preoccupations of the moment, necessarily loom large in our minds, production may well show vast increases. Not only can the *per capita* consumption of cotton cloth increase in the face of an increasing population, but we may have a larger exportable surplus, produced at prices which will bear competition.

Basic Conditions of Industry's Progress

Past achievements and future possibilities are alike impressive and inspiring. But there is a concentration of circumstances which make the present bristle with problems of a wide range and scope and of crucial significance. While experts, interested or otherwise, grapple with these problems, it is of immense importance that the public should have a fairly clear perception of the nature of these problems, their inter relations and inter actions, their bearing on what is loosely termed the national economic problem. The first point to seize is that the basic conditions in which we in the past imagined the growth and development of the Indian Cotton Textile Industry are changed almost beyond recognition. We assumed then a plenitude of raw material such as involved no question of encroachment on land for other purposes a terrific pressure of

imports which it was hopeless for Indian goods to displace except with the aid of high tariffs and, what goes with it, the virtual impossibility of an export trade. None of these conditions is as true now as a decade or two ago. We have at present vexatious problems of the supply of raw cotton. We have to consider the rival claims of food crops and cash crops on the total acreage available for cultivation. Imports at one time were not obtainable. And exports have risen to the point at which it is necessary to consider the levels of exports which can be deemed feasible and desirable from the point of view of the national economy as a whole. Considering the need for imports of raw materials, the way cotton cultivation has impinged on food cultivation and the problem of our food supplies, and the new found feasibility of exports of cotton goods, cotton and cotton goods bear an altogether different relation to our foreign trade problems than in the past. Indeed, the problems of cotton and cotton goods are inter woven with the problems of our national economy in a radically different way. The designs and the patterns are far different.

By far the most potent source of these changes is the political partition which has shorn from India her sources of long staple cotton and converted a considerable part of the home market into a foreign market. These effects of partition came on top of the nexus of controls which had been imposed as a result of the conditions of the war period and which have continued to be necessary ever since. Control of cotton cloth and control of raw cotton have been linked together because control of cotton goods prices would be impossible without the control of the prices of the raw material. An independent reason for the latter is the restriction of acreage for purposes of increasing food production. The control of cotton cloth prices also involved the control or regulation of production and the long story of Government attempts to determine production in accordance with the needs of the common man as the Government conceived them. The failure of those attempts, the period of sharp changes in the direction of control and decontrol, all these make up one phase of the recent history of our cotton textile industry which could be forgotten, but for the aftermath which it undoubtedly has.

Indigenous Production of Raw Cotton

Partly on account of the past development in regard to control and in greater part on account of the partition and the undependability of supplies from Pakistan India has at the moment the need to look into the sources of her raw

cotton supplies and determine the basis on which the textile industry can meet its requirements of the raw material. It is certain that India cannot replace the supplies of long staple cotton with her own production except over a period of time, in which she has of necessity to import cotton from Egypt, U.S.A., and other countries, that is, if, when and to the extent, supplies from Pakistan are unavailable. There is a certain degree of confidence among experts that Indian agriculture can switch over from the production of short staple to long staple cotton and meet the requirements of the Indian industry in respect of long staple cotton. But the problems flowing from such a change-over are important to the future of our national economy. To the first question whether the change will involve an increase in the acreage under cotton which will necessarily be at the expense of food production and the necessary increases therein, the answer is a welcome negative. To the next question, whether it would lead to a cut in our export surplus of short staple raw cotton the answer would seem to be more that such a cut should be welcomed than that it could be avoided. The advantages of India being able to find her requirements of raw cotton within the country, however, far outweigh any possible disadvantages. For internal production of raw cotton would mean the elimination of imports which are costly, politically and economically alike, and the possibility of Indian cotton goods improving the position they have recently gained in the foreign markets. The expansion of India's exports of cotton goods depends directly on her ability to produce more of fine goods and at lower prices than at present. The quantity of fine goods is reduced by the difficulty of procuring long staple cotton, while costs are put up by the high prices we have had to pay for it. It is clear, therefore, that the production of long staple cotton at home would relieve the country from the embarrassing predicament she found herself in, only too frequently during the last few years.

Problem of Raw Materials

Of the crucial problems facing the industry today, that in regard to the supply of raw materials is, of course, the first and foremost. The worries under this head are on different planes. The lowest and the most immediate is the problem of ceiling prices, which fortunately has only

recently been satisfactorily settled. The next is the problem of prices of cotton goods, the revision of which has exercised the minds of the smaller or the less efficient units. Uninterrupted supplies of raw materials, remunerative prices and help in finding and holding foreign markets constitute the principal requirements. No longer is it a matter of extension of protection. Entry into export markets is adequate proof of that. But as in most cases, there is a point at which long term and short term problems should be considered together in some kind of combination. If we do that, the industry can ignore the headaches caused by partition, forget the pinpricks and the annoyances of official controls and look forward to the day when it can meet in full the requirements of the market and at the same time far from causing a drain on our foreign exchange, actually make sizeable contribution to it.

Cotton Industry's Export Potential

The dawn of that day will depend firstly on the production of long staple cotton in adequate quantities within the country and secondly on the ability of the industry to utilise it in economic production. It is in respect of the latter that preparation seems yet to have been inadequate. The technical efficiency of Indian mills has not made any progress in keeping with the expansion of its opportunities. Today as we began by pointing out India is one of the big exporters of cotton cloth in the world. The British Cotton Textile Industry is no longer the threat that it was to the Indian industry. Japan has been wiped off the map for the present though her come-back must be deemed significant. American competition is hampered by the world-wide scarcity of her currency. India has all the advantages that one could desire so far as international conditions are concerned. And there is within the country a trend of events which, through food shortage and other attendant problems, must make India a great exporter of manufactured goods. The industry which is in the foremost position to help the nation to realise this destiny, is the Cotton Textile Industry. Even more than the public and the Government, the industry has to acquire a new outlook and a new faith and forge ahead. The difficulties in the way are bound to be swept aside, once a determined effort is made in that direction.

THE END

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1	Aspico Mills, Ltd., DeLade Road, Chancel par gth	Messrs. The Rajputana Textile (Agency), Ltd., Agents Office on Mill premises	45,500	42,598	508	887	12,299	1,5	
2	Barbati Ramcharan Cotton Mills, Ltd., Ferguson Road, Lower Parcel	Messrs. B R Sons Ltd., Agents Empire House, Hornby Road, Bombay	49,100	40,739	1,021	976	448	1,4	
3	Bombay Dyeing and Mfg. Co., Ltd. (Spring Mills), Naugram Road, Dadar	Messrs. Nonrajee Madu & Sons Ltd., Agents Noville House, Graham Road Ballard Estate, Fort, Bombay	1,09,840	1,03,062	3,224	3,087	1,048	3,5	
4	Bombay Dyeing and Mfg. Co., Ltd. (Textile Mills), Elphinstone Road, Para 1	Messrs. Bannarjan Sons, Ltd., Agents, Imperial Bank Annex, Bank Street Fort Road	31,992	32,612	849	794	1,087	3,0	
5	Bradbury Mills, Ltd., Ripon Road, Jacob Circle							1,4	
	Century Spinning and Manufacturing Co., Ltd. (Century Mill), Junction of DeLade Road and Elphinstone Road	Messrs. Sir Chundilal Mehta & Sons Ltd., Agents, Queen's Mansions, Prescott Road, Fort, Bombay	1,09,720	99,472	2,081	2,489	1,04	5,11	
	Century Spinning and Manufacturing Co., Ltd. (Zenith Mill), Junction of DeLade Road and Elphinstone Road	Managed by Board of Directors Office on Mill premises	32,204	41,211	647	681	160		
	Colaba Land and Mill Company, Ltd. (G.I. Mill), Victoria Bunder, Colaba	Messrs. Ganesha Ichangur & Co. Ltd. Secretaries, Treasurers and Agents Readymoney Mission Churchgate Street Fort Bombay	11,476	24,080	680	602	153		
	Colaba Land and Mill Company, Ltd., Johangur								
	Colaba Land and Mill Company, Ltd., Victoria Bunder, Colaba								
	Corla Spinning and Weaving Company, Ltd., Kurla	Messrs. Parshotam Vithaldas & Co., Secretaries and Agents, Sir Vithaldas Chambers Apollo Street Fort, Bombay	42,216	42,402	1,014	1,014	27	1,60	
	Crown Spinning and Manufacturing Co., Ltd. (formerly Dhun Mills), New Parkadevi Road Parcel	Messrs. Bannarjan Sons Ltd. Agents Imperial Bank Annex Bank Street Fort Bombay	31,624	32,042			1,65	1,64	
	Dawn Mills Company Ltd., Ferguson Road Lower Parcel	Messrs. Ramgopal Ganpatra & Sons Ltd., Managing Agents Office on Mill premises	36,716	33,670	786	736	4,936	1,32	
	Dhanraj Mills Ltd. (formerly Assur Virji Mills Ltd.) Sun Mill Road, Lower Parcel	Messrs. Jethalalal Khatao & Co. (Agency) Ltd. Agents Office on Mill premises	42,192	42,020	1,177	1,004	7,490	1,58	
	Digvijay Spinning and Weaving Co., Ltd. (formerly Dandhaw Patti Mills), 1st Bang. Parcel	Messrs. Parmanand Radhakrishna & Co., Agents, Indu House, 15 Douglas Road, Ballard Estate, Fort, Bombay	48,304	42,826	928	860	14,516	1,37	
	Edward Textiles Ltd. (formerly Edward Sassoon Mills Ltd.), Ferguson Road, Lower Parcel	Messrs. Chidambaram Malraj & Co. Ltd., Agents, Kamur Chambers, 22, Neel Road, Ballard Estate, Fort, Bombay	42,072	38,276	885	871	10,266	1,74	
	Elphinstone Spinning and Weaving Mills Co., Ltd., Elphinstone Road Parcel								
	Finlay Mills Ltd., Government Gate Road Parcel	Messrs. James Finlay & Co. Ltd., Agents, Chartered Bank Buildings, Fort, Bombay	46,072	41,596	764	759	4,875	1,846	
	Gold Mohur Mills, Ltd., Dadar Main Road	Messrs. James Finlay & Co., Ltd., Agents, Chartered Bank Buildings, Fort, Bombay	40,540	35,974	1,020	984	5,130	1,631	
	Hind Mills Ltd. (formerly David Mills Co., Ltd.) (Mill No. 1), Carroll Road, Parcel	Messrs. Hind Agents Ltd. Mg Agents Indu House, 15 Douglas Road, Ballard Estate, Fort, Bombay	76,112	65,918	1,227	1,103	19,837	2,394	
	Hind Mills Ltd. (formerly David Mills Co. Ltd.) (Mill No. 2) Carroll Road, Parcel								
	Himrostan Spinning and Weaving Mills Co., Ltd., Ripon Road Jacob Circle	Messrs. Thackersey Mooljee & Co., Agents Sir Vithaldas Chambers Apollo Street Fort Bombay	45,712	38,906	1,216	1,122	9,275	1,065	
	Hirjee Mills, Ltd. (formerly Presidency Mills Co., Ltd.), Ferguson Road Lower Parcel	Messrs. J R Bhambhani & Co. Ltd. Agents, Office on Mill premises	48,012	40,744	894	846	9,217	2,181	
	Indian Manufacturing Co., Ltd., Lamington Road North Jacob Circle	Messrs. Damodar Thackersey Mooljee & Co. Agents Sir Vithaldas Chambers Apollo Street, Fort, Bombay	49,068	46,240	1,167	1,018	9,733	1,077	
	India United Mills, Ltd., No. 1 Mill (formerly Jacob Mill), Suprabhaur Road Parcel		46,760	86,180	2,228	2,061	20,833	3,525	
	India United Mills, Ltd., No. 2 Mill (formerly Alexandra Mills) Complex Road, Churnpoo gth		3,880	32,166	742	709	26,368	1,647	
	India United Mills, Ltd., No. 3 Mill (formerly E D Mill), Gouppoo Road, Churnpoo gth	Messrs. Agarwal & Co., Agents, Indu House, Douglas Road Ballard Estate, Fort, Bombay	76,450	71,964	712	712	1,371	1,337	
	India United Mills, Ltd., No. 4 Mill (formerly Rachel Mill), Churnpoo gth Road					1,890	1,685	1,371	
	India United Mills, Ltd., No. 5 Mill (formerly Manchester Mill), Churnpoo gth Cross Lane, Kala chowki		28,940	26,744	684	657	4,466	779	
	Jam Manufacturing Co. Ltd., Mill No. 1, Lalbaug, Parcel		27,200	23,185	910	800	4,303	1,120	
	Jam Manufacturing Co., Ltd., Mill No. 2 (formerly Baria Mills, Ltd., No. 2), Secret Road	Messrs. Premadasa Yandrasani & Co., Treasurers and Agents, Secretaries Lalbaug, Parcel, Bombay	23,516	22,283	574	670	2,638	958	

COTTON MILLS IN THE CITY & ISLAND OF BOMBAY

NAME OF MILLS		NAMES OF AGENTS OR OWNERS AND THEIR ADDRESSES		Total Number of spindles in total	Average Number of spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approximate quantity of cotton consumed during the year in hanks of 72 1/2 lbs	Average Number of Hands employed daily
31	Jubilee Mills Ltd., New Seewee Road	Messrs. Clumhli, M. L. & Co., Ltd., S. K. & Co., 1, Apollo Street, Fort Bombay	Agents	78,283	74,391	680	637	4,945	1,189
	Kamala Mills, Ltd. (formerly Ebrahmulla & Pabany Mills) Tulsi Pipe Line Road, P DeLisle Road	M. L. & Co., 1, Apollo Street, Fort Bombay	Agents	18,984	15,202	1,050	1,020	9,274	2,312
	Khatu Makany Spinning and Weaving Co. Ltd. Haines Road, Byculla	M. L. & Co., 1, Apollo Street, Fort Bombay	Agents	61,872	77,790	1,417	1,392	8,740	2,914
	Kolmoor Mills Co., Ltd. (Nos. 1 & 2) Mill Nagaram Cross Road, D. J. Far	M. L. & Co., 1, Apollo Street, Fort Bombay	Agents	1,07,240	1,00,174	1,846	1,811	20,150	5,140
	Madhway Dharanrao Manufacturing Co. Ltd. Forbes Road, Tarkode	Messrs. D. H. Brady & Co., Ltd., Agents, 14, Churchgate Street, Fort Bombay	Agents	74,712	36,764	838	827	4,690	1,732
	Sri Madhwarao Mills, (formerly Pearl Mill) DeLisle Road	M. L. & Co., 1, Apollo Street, Fort Bombay	Agents	7,592	49,507	1,742	1,436	14,967	2,719
	Modern Mills, Ltd., Mill No. 1 (formerly Modern Spinning Manufacturing Co. Ltd. Mill No. 2) Elphinstone Road, Parel	Messrs. N. S. & Co. Ltd. Agents, 70, Forbes Street, Fort Bombay	Agents	23,876	22,800				828
	Modern Mills, Ltd., Mill No. 2 (formerly B. N. S.) Pettit Mills, Mahatma			10,308	10,166	444	433		651
	Moon Mills Ltd., New Seewee Road	Messrs. Asahi Textile Co. Ltd., Agents General Assurance Building Hornby Road, Fort Bombay	Agents	74,428		870			
	Morarjee Goenka Spinning and Weaving Co. Ltd., (Superior) Road, Parel	Messrs. Purnam Gangadhar, Agents, Office on Mill premises	Agents	60,602	50,761	1,672	1,407	15,774	3,721
	New Chitra Mills, Ltd. (formerly Chitra Mill) Seewee	Mr. N. S. & Co. Ltd., Agents, 70, Forbes Street, Fort Bombay	Agents	42,792	39,169	776	728	5,408	1,671
	New City of Bombay Manufacturing Co., Ltd. Albert Road, Churchpooy	Messrs. W. H. Brady & Co., Ltd., Agents Royal Insurance Building, 12, 14, Churchgate Street, Fort Bombay	Agents	45,914	44,137	432	476	6,423	1,430
	New Great Eastern Spinning and Weaving Co., Ltd., Victoria Gardens Road, Churchpooy	Messrs. H. H. Brady & Co., Ltd., Agents, Royal Insurance Building, 12, 14, Churchgate Street, Fort Bombay	Agents	46,544	45,232	1,018	909	9,813	2,158
	New Kaiser, Hind Spinning and Weaving Co. Ltd. Gorupoo Road, Churchpooy	Lola Bahadur Dandana, Mg. Director J. K. Building Donyall Road Ballard Fateo Bombay	Agents	53,716	46,317	1,405	1,264	9,867	2,242
	New Pralhad Mills, Ltd. (formerly Pralhad Mills) Ferguson Road, Lower Parel	Messrs. Amrit Banaspati Co., Ltd., Agents, East & West Building Apollo Street, Fort Bombay	Agents	33,440	31,107	1,000	957	10,911	1,955
	New Sun Mills Co., Ltd. (formerly Madhwa Rao Scindia Mill), Sun Mill Road Lower Parel	Messrs. Bhupatkar Karanashanker and Karanashanker Pampuram, Mg. Direc- tors 81/60, Chinchli Street, Bombay No. 3	Agents	17,244	15,069	319		1,504	569
	New Union Mills, Ltd. (formerly Union Mills) DeLisle Road, Lower Parel	Messrs. Mafatlal Chandulal & Co. (Bombay) Ltd. Mg. Agents 127 Mahatma Gandhi Road, Fort, Bombay	Agents	37,632	28,842	873	799	11,590	1,634
	Pioneer Mills Ltd. (formerly Britannia Mills) Tulsi Pipe Line Road, Lower Parel	Messrs. Pamaran Sons, Ltd., Agents, Imperial Bank Annex, Bank Street, Fort, Bombay	Agents	74,320	47,437	945	931	11,350	2,218
	Podar Mills, Ltd. (formerly Tovo Podar Cotton Mills, Ltd.), DeLisle Road	Messrs. Podar Sons Ltd. Managing Agents Podar Chambers, Parsee Bazar Street, Fort Bombay	Agents	31,800	28,441	930	850	10,203	1,101
	Prakash Cotton Mills Ltd. (formerly Sekaria Cotton Mill No. 2), DeLisle Road	Messrs. Sekaria Industries Ltd., Sekaria Chambers, 139, Meadows Street, Fort, Bombay	Agents	17,944	16,301	376	331	1,100	1,170
	Rajhavanth Mills, Ltd. (formerly Kalaehandi Mills Ltd.), 11 12, Haines Road, Mahalaxmi	Messrs. Rajhavanth Maganti & Co. Ltd., Agents, Office on Mill premises	Agents	37,160	32,701	122		12,943	1,403
	Ruby Mills, Ltd. (formerly Sorab Mills) Woolen Mill Gully, Laxly Jamshedji Road, Dadar	Messrs. Choonilal Jevanmal & Co., Agents, 49 50, Apollo Street, Fort, Bombay	Agents	1,420	14,217	430	413	2,000	700
	Sassoon Spinning and Weaving Co., Ltd., Mount Estate, Chorupode, Mazagon	Messrs. M. G. Investment Corporation Ltd., Agents 127, Mahatma Gandhi Road Fort Bombay	Agents	60,210	50,962	1,203	1,152	10,460	2,000
	Sekaria Cotton Mills, Ltd., Mill Nos. 1 & 1A, (formerly Currambhoy and Mohamedkhos Mills) Tulsi Pipe Line Road, DeLisle Road	Messrs. Sekaria Sons Ltd., Agents, 133, Meadows Street Fort, Bombay	Agents	72,796	68,897	1,045	1,032	10,616	2,994
	Shree Narva Cotton Mill, Ltd. (formerly Fazil Mills, Ltd.), Tulsi Pipe Line Road, DeLisle Road	Messrs. The Narva Textiles (Agency) Ltd., Agents, Shree Narva, Home, Wandjy Road, Fort, Bombay	Agents	66,472	49,042	1,640	1,563	10,217	2,601
	Shree Ram Mills, Ltd. (formerly Crescent Mills, Ltd.), Ferguson Road, Worli, Lower Parel	Messrs. Bhogilal Menajay & Co. Ltd., Agents, Office on Mill premises	Agents	48,524	40,149	900	931	4,140	1,843
	Simplex Mills Co., Ltd., Clerk Road, Jacob Circle, Byculla	Messrs. Forbes Forbes Landell & Co., Ltd. Agents Forbes Building Home Street, Fort, Bombay	Agents	36,324	31,089	1,207	1,211	10,568	2,276

COTTON MILLS IN AHMEDABAD

Sl. No.	NAME OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles Installed	Average Number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approved quantity of Cotton consumed during the year in pounds a of 704 lbs	Average Number of Hands employed daily
13	Ahmedabad Shri Ramkrishna Mills Co., Ltd., Gomtipur Road, Ahmedabad	Messrs Chumandlal Maneckchand & Co Agents, Office on Mill premises	25,412	22,097	498	487	2,069	874
14	Aji Mills, Ltd., Rakhiyal Road, Ahmedabad	Messrs Chumandlal Narainbhai & Co., Ltd Agents, Office on Mill premises	23,064	21,974	712	707	5,231	1,008
15	Ananta Mills, Ltd., Rakhiyal Road, Ahmedabad	Messrs Jivanlal Anandlal Ltd Agents Post Box No 42, Ahmedabad	21,692	21,708	440	445	5,267	960
16	Aruna Mills, Ltd., Naroda Road, Ahmedabad	Messrs P. M. Huthingsen & Sons Ltd Agents Post Box No 77 Ahmedabad	40,728	40,432	880	861	7,007	1,592
17	Arund Mills, Ltd., Naroda Road, Ahmedabad	Messrs Narottam Lalibhai & Co Agents Office on Mill premises	49,070	36,947	1,216	1,212	7,270	1,864
18	Arund Ginning and Mfg Co., Ltd (formerly Ahmedabad Vyapar Gotejacks Spinning and Mfg Company, Limited), Awarra Road, Ahmedabad	Messrs Mangaldas & Brothers Ltd Agents, Office on Mill premises	32,900	32,134	884	865	7,004	1,583
19	Arund Spinning and Weaving Co., Ltd., No 1, Awarra Road, Ahmedabad	Messrs Mangaldas and Lalibhai & Co Agents Post Box No 141 Ahmedabad	32,788	31,436	1,108	1,084	7,185	2,023
20	Arund Spinning and Weaving Co., Ltd. No 2 Awarra Road, Ahmedabad							
21	Awarra Mills Ltd, (formerly Hitwardhal Cotton Mills Co., Ltd.), Awarra Road, Ahmedabad	Messrs Chhotabhai Patel & Co Ltd Agents 12 Bell Lane N. M. Wadia Bldg Fort Bombay	21,424	21,587	906	773	4,818	1,045
22	Avoka Mills, Ltd., Naroda Road, Ahmedabad	Messrs Lalibhai Dalpatbhai & Co Agents Post Box No 55 Ahmedabad	16,264	15,636	934	846	7,797	1,346
23	Beharals Spinning and Weaving Mills Co Ltd Rakhiyal Road, Ahmedabad	Messrs Durgaprasad S. Laskar & Co., Ltd Agents, Office on Mill premises	19,320	19,787	496	461	4,233	843
24	Bhalakra Mills Co., Ltd., Kankaria Road, Ahmedabad	Messrs Chumandlal & Co Ltd Agents Office on Mill premises	16,464	16,309	800	822	3,989	879
25	Bharatkhand Textile Mfg Co., Ltd., No 1, Camp Road, Ahmedabad	Messrs Jivanlal Chitthalal & Co Ltd Agents Post Box No 70 Ahmedabad	31,720	30,513	852	830	3,707	1,178
26	Bharatkhand Textile Mfg Co., Ltd., No 2, Camp Road, Ahmedabad							
27	Bharat Vaypura Mills Co., Ltd (formerly India Spg & Wvg Co., Ltd.), Kankaria Road, Indrapur Ahmedabad	Messrs Mohabbat Bros, Agents 2 Krishna Society, Ellis Bridge, Ahmedabad	13,700	12,868	374	364	3,746	760
28	Bihari Mills, Ltd., Near Khokra Mehmedabad, Ahmedabad	Messrs Motilal Harilal & Co., Ltd, Agents Post Box No 4 Ahmedabad	18,240	17,432	440	436	4,310	798
29	City of Ahmedabad Spinning and Manufacturing Co., Limited, Kankaria Road, Ahmedabad	Messrs Chumandlal Mangaldas & Sons Agents, Office on Mill premises	22,940	20,962	702		4,101	697
30	Commercial Ahmedabad Mills Co., Ltd., Outside Prem Darwaja, Ahmedabad	Messrs Diwanbhai and Tricunlal & Co., Ltd, Agents Office on Mill premises	27,512	26,899	620	611	5,071	1,125
31	Fine Knitting Co., Ltd., Near Chaudhni Mata, Naroda Road, Ahmedabad	Messrs H. Krishanlal & Co., Agents, Rail waypura, Ahmedabad	9,000	9,000			2,682	394
32	Girdharidas Harilalabhai Mills, Ltd (formerly Raygote Mill No 2), Outside Prem Darwaja Ahmedabad	Messrs Chumandlal Mangaldas & Co., Agents, Office on Mill premises	21,808	21,402			2,339	588
33	Gujarat Cotton Mills Co., Ltd., Naroda Road, Ahmedabad	Messrs Chaturani & Sons Agents, Office on Mill premises	31,888	28,398	606	575	3,806	1,274
34	Gujarat Ginning & Mfg Co., Ltd., Outside Prem Gate, Ahmedabad	Messrs Jannabhai Manasukhbhai Agents Office on Mill premises	25,272		644			
35	Gujarat Hosiery Factory, Rakhiyal Road, Ahmedabad	Messrs C. C. Dalal & Co., Owners, Office on Mill premises	10,260	10,264			1,187	271
36	Gujarat Spinning and Weaving Co., Ltd., Outside Kalupur Gate, Ahmedabad	Messrs Jannabhai Manasukhbhai & Co., Agents, Office on Mill premises	28,792	27,856	674	638	7,300	1,310
37	Harilalabhai Mulchand Mills Co., Ltd., Outside Darapur Gate, Ahmedabad	Messrs Gurbharil Harilal & Co., Agents, Office on Mill premises	17,712	17,323	448	439	4,072	760
38	Itakhing Manufacturing Co., Ltd., Outside Saraspur Gate, Ahmedabad	Messrs Vannakul Manasubhai & Co., Agents, Post Box No 2, Ahmedabad	13,336	11,617			1,664	333
39	Humabhai Manufacturing Co., Ltd., Near Saraspur Gate, Ahmedabad	Messrs Dhurajlal Khushaldas & Bros., Agents Office on Mill premises	17,560	17,136	436	430	1,931	709
40	Jehangir Vakil Mills Co., Ltd., Outside Delhi Gate, Ahmedabad	Messrs Kustoge Mangalal & Co., Ltd Agents, Office on Mill premises	32,664	31,166	701	690	6,104	1,349
41	Jitendra Mills, Ltd (formerly Aashiba Mill), Outside Astodia Gate, Ahmedabad	Mr. N. K. Jhaveri, Hon. Liquidator, 2372, Ratanpore, Ahmedabad	3,600					
42	Kalyan Mills, Ltd., Naroda Road, Ahmedabad	Mr. Radheshyam R. Morarka, Director in charge, 74, Marine Drive, Bombay	17,209	12,400	343	377	3,138	620
43	Lalibhai Tricunlal Mills, Ltd., Rakhiyal Road, Ahmedabad	Messrs Chumandlal Lalibhai and Bros., Ltd, Agents, Office on Mill premises	21,936	29,442	783	772	4,578	1,573
44	Maheshwari Mills Ltd (formerly Ahmedabad Cotton and Waste Mfg Co., Ltd.), Shahibag Road, Ahmedabad	Messrs Dhurajlal Khushaldas & Co., Agents Post Box No 79 Ahmedabad	21,032	21,015	128	501	2,181	897
45	Maneckchowk and Ahmedabad Mfg Co Ltd., Nos 1 and 2, Railwaypura Post, Ahmedabad	Messrs Harilal Tricunlal & Sons, Agents, Office on Mill premises	31,128	31,128	832	804	6,691	1,274
46	Maneklal Harilal Spinning and Mfg Co., Ltd., Saraspur, Ahmedabad	Messrs Harilal Harilalabhai & Co., Ltd., Agents, Office on Mill premises	32,164	31,767	752	745	7,283	1,500
47	Marelden Spinning and Manufacturing Co., Ltd., Gomtipur, Ahmedabad	Messrs Marelden Bros & Co., Ltd., Agents Office on Mill premises	22,244	21,967	482	476	6,730	1,163
48	Monogram Mills Co., Ltd., Rakhiyal, Ahmedabad	Messrs Manlal, Marelden & Co., Ltd Agents, Office on Mill premises	23,816	23,816	524	522	7,195	1,212
49	Nagri Mills Co., Ltd., Rajpur, Gomtipur Road, Ahmedabad	Messrs Topilal Chumandlal & Co., Agents Post Box No 76, Ahmedabad	19,640	17,747	500	496	5,501	872
50	National Mills Co., Ltd., Gomtipur Road, Ahmedabad	Messrs Chumandlal and Govindlal & Co., Ltd., Agents, Office on Mill premises	19,712	19,445	492	475	2,636	926

COTTON MILLS IN AHMEDABAD

NAME OF MILLS	NAME OF MANAGERS OR OWNERS (AND OFFICE ADDRESS)	Total Number of spindles installed	Average Number of spindles at work daily	Number of looms installed	Average Number of looms at work daily	Total quantity of cotton consumed during the year in run of 74 lbs	Average Number Hanks employee daily
13 Ahmedabad Shri Ramkrishna Mills Co., Ltd., Gomtipur Road, Ahmedabad	Messrs. Chimanlal Maneklal & Co., Ltd., Agents, Office on Mill premises	25,432	22,005	498	447	2,068	87
14 Apt Mills, Ltd., Rakhal Road, Ahmedabad	Messrs. Chimanbhai Narimbhai & Co., Ltd., Agents, Office on Mill premises	24,068	21,954	512	507	2,331	1,000
15 Ananta Mills, Ltd., Rakhal Road, Ahmedabad	Messrs. Jayantilal Anantlal Ltd., Agents, Post Box No. 42, Ahmedabad	21,992	21,708	450	441	2,267	960
16 Aruna Mills, Ltd., Naroda Road, Ahmedabad	Messrs. P. M. Huthersing & Sons Ltd., Agents, Post Box No. 37, Ahmedabad	40,728	40,432	850	841	7,003	1,59
17 Arvind Mills, Ltd., Naroda Road, Ahmedabad	Messrs. Narainbhai Lalbhai & Co., Agents, Office on Mill premises	39,070	38,947	1,216	1,212	7,270	1,860
18 Aryodaya Ginning and Mfg. Co., Ltd. (formerly Ahmedabad Vyapar Ootepak Spinning and Mfg. Company, Limited), Asaria Road, Ahme- dabad	Messrs. Mangaldas & Brothers Ltd., Agents, Office on Mill premises	32,940	32,131	881	863	7,004	1,565
19 Aryodaya Spinning and Weaving Co., Ltd., No. 1, Asaria Road, Ahmedabad	Messrs. Mangaldas and Balalal & Co., Agents, Post Box No. 146, Ahmedabad	32,788	31,656	1,108	1,064	7,185	2,025
20 Aryodaya Spinning and Weaving Co., Ltd., No. 2, Asaria Road, Ahmedabad							
21 Asarika Mills Ltd. (formerly Hattwarbhai Cotton Mills Co., Ltd.), Asaria Road, Ahmedabad	Messrs. Chhotabhai Patel & Co., Ltd., Agents, 12, Bell Lane, N. M. Wadia Bldg., Fort, Bombay	21,824	21,587	366	351	4,818	1,099
22 Asoka Mills, Ltd., Naroda Road, Ahmedabad	Messrs. Lalbhai Dalpatbhai & Co., Agents, Post Box No. 35, Ahmedabad	36,261	35,650	931	846	7,797	1,348
23 Becharand Spinning and Weaving Mills Co., Ltd., Rakhal Road, Ahmedabad	Messrs. Durgaprasad S. Lachari & Co., Ltd., Agents, Office on Mill premises	19,320	18,787	498	461	4,243	843
24 Bhalaka Mills Co., Ltd., Kankaria Road, Ahmedabad	Messrs. Chandulal & Co., Ltd., Agents, Office on Mill premises	10,461	10,309	800	722	3,980	870
25 Bharatkhand Textile Mfg. Co., Ltd., No. 1, Camp Road, Ahmedabad	Messrs. Jivanlal Giriharlal & Co., Ltd., Agents, Post Box No. 39, Ahmedabad	31,729	30,313	852	830	3,705	1,376
26 Bharatkhand Textile Mfg. Co., Ltd., No. 2, Camp Road, Ahmedabad							
27 Bharat Surodaya Mills Co., Ltd. (formerly India Spg & Wvg. Co., Ltd.), Kankaria Road, Rail way, Ahmedabad	Messrs. Mohitbhai Bros., Agents, 2 Krishna Society, Flats Bridge, Ahmedabad	13,700	12,868	374	364	3,746	760
28 Bhavn Mills, Ltd., Near Khokra, Ahmedabad	Messrs. Motilal Harilal & Co., Ltd., Agents, Post Box No. 4, Ahmedabad	18,210	17,452	440	436	4,310	798
29 City of Ahmedabad Spinning and Manufacturing Co., Limited, Kankaria Road, Ahmedabad	Messrs. Chamanlal Mangaldas & Sons, Agents, Office on Mill premises	22,940	20,962	302	4,191	597	
30 Commercial Ahmedabad Mills Co., Ltd., Outside Prem Darwaja, Ahmedabad	Messrs. Dhunabhai and Trummal & Co. Ltd., Agents, Office on Mill premises	27,512	26,893	620	613	1,051	1,125
31 Fine Knitting Co., Ltd., Near Chaudhda Mata, Naroda Road, Ahmedabad	Messrs. H. Keshavlal & Co., Agents, Rail way, Ahmedabad	9,000	9,000			2,042	394
32 Giridhars Harvalalbhais Mills Ltd. (formerly Rajnagar Mill No. 2), Outside Prem Darwaja, Ahmedabad	Messrs. Chamanlal Mangaldas & Co., Agents, Office on Mill premises	21,808	21,402			2,339	588
33 Gujarat Cotton Mills Co., Ltd., Naroda Road, Ahmedabad	Messrs. Chaturani & Sons, Agents, Office on Mill premises	31,888	28,398	606	571	3,806	1,274
34 Gujarat Ginning & Mfg. Co., Ltd., Outside Prem Gate, Ahmedabad	Messrs. Jambhadas Manokhaldas, Agents, Office on Mill premises	25,232		634			
35 Gujarat Hosiery Factory, Rakhal Road, Ahmedabad	Messrs. C. C. Dalal & Co., Owners, Office on Mill premises	10,620	10,204			1,187	271
36 Gujarat Spinning and Weaving Co., Ltd. Outside Kalapur Gate, Ahmedabad	Messrs. Jambhadas Manokhaldas & Co., Agents, Office on Mill premises	28,792	27,836	674	638	7,300	1,310
37 Harvalalbhais Mulchand Mills Co., Ltd., Outside Darapur Gate, Ahmedabad	Messrs. Giriharlal Harilal & Co., Agents, Office on Mill premises	17,712	17,323	448	433	4,072	760
38 Hathising Manufacturing Co., Ltd., Outside Barasapur Gate, Ahmedabad	Messrs. Maneklal Manabhai & Co., Agents, Post Box No. 2, Ahmedabad	19,750	11,617			1,864	333
39 Himabhai Manufacturing Co., Ltd., Near Barasapur Gate, Ahmedabad	Messrs. Dhurajlal Khushaldas & Bros. Agents, Office on Mill premises	17,900	17,136	436	430	1,931	709
40 Jhanger Vakil Mills Co., Ltd., Outside Della Gate, Ahmedabad	Messrs. Hastomjee Mangaldas & Co. Ltd., Agents, Office on Mill premises	12,664	13,166	761	690	6,104	1,348
41 Jitendra Mills, Ltd. (formerly Astha Mills), Outside Astha Gate, Ahmedabad	Mr. N. K. Bhavani Hon. Liquidator, 2972, Hatampole, Ahmedabad	3,000					
42 Kalyan Mills, Ltd., Naroda Road, Ahmedabad	Mr. Radhobhai R. Morarka, Director in charge, 74, Marine Drive, Bombay	13,260	12,400	391	377	3,448	620
43 Lalbhai Trummal Mills Ltd. Rakhal Road, Ahmedabad	Messrs. Chimanbhai Lalbhai and Bros. Ltd. Agents, Office on Mill premises	29,930	29,432	784	772	3,578	1,373
44 Maheshwar Mills Ltd. (formerly Ahmedabad Cotton and Waste Mfg. Co., Ltd.), Shahibag Road, Ahmedabad	Messrs. Dhurajlal Khushaldas & Co. Agents, Post Box No. 79, Ahmedabad	21,072	21,015	625	601	2,141	897
45 Manekchowk and Ahmedabad Mfg. Co., Ltd., Nos. 1 and 2, Railway pura, Ahmedabad	Messrs. Harilal Trummal & Sons, Agents, Office on Mill premises	31,128	31,128	842	804	6,631	1,274
46 Maneklal Harilal Spinning and Mfg. Co., Ltd., Barasapur, Ahmedabad	Messrs. Harilal Harvalalbhais & Co., Ltd., Agents, Office on Mill premises	32,164	31,767	712	745	7,293	1,500
47 Marsden Spinning and Manufacturing Co., Ltd., Gomtipur, Ahmedabad	Messrs. Marsden Bros. & Co., Ltd., Agents, Office on Mill premises	22,214	21,983	482	476	6,733	1,163
48 Monogram Mills Co., Ltd., Rakhal, Ahmedabad	Messrs. Vardilal, Marsden & Co., Ltd. Agents, Office on Mill premises	22,876	23,816	528	522	7,198	1,212
49 Nagra Mills Co., Ltd., Rajpur Gomtipur Road, Ahmedabad	Messrs. Popatlal Chimanlal & Co., Agents, Post Box No. 36, Ahmedabad	19,040	17,747	500	496	5,391	972
50 National Mills Co., Ltd., Gomtipur Road, Ahmeda- bad	Messrs. Chamanlal and Govindlal & Co. Ltd. Agents, Office on Mill premises	10,712	10,443	402	473	2,636	928

COTTON MILLS IN AHMEDABAD

Sl. No.	NAME OF MILLS	NAME OF AGENTS OR OWNERS AND OFFICE ADDRESS	Total number of spindles installed	Average number of spindles at work daily	Number of Looms installed	Average number of Looms at work daily	Average number of spindles in operation during the year 1934-35	Average number of spindles in operation during the year 1935-36
51	New Central Mills Co. Ltd. Naroda Road Ahmedabad	Messrs. Tripathi Bhogilal & Co. Ltd. Agents Office on Mill premises	3656	341	90	47	558	1431
52	New Manek Chowk Spinning and Weaving Co. Ltd. Old Dharmer Gate Rajwa-pura Ahmedabad	Messrs. Lalbhai Trivedi & Co. Ltd. Agents Office on Mill premises	901	881	628	604	416	103
53	New National Mills Ltd. Rajal Road Ahmedabad	Messrs. Tripathi Bhogilal Son & Co. Agents Office on Mill premises	1803	1859	450	418	41	7
54	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. Bhakhlal J. Alia & Co. Ltd. Agents Office on Mill premises	10790	1893	30	302		603
55	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. The Cotton Agents Ltd. Agents Office on Mill premises	310	604	75	30		1540
56	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. J. B. K. Fort Road Ltd. Agents Office on Mill premises	984	9198	906	94		910
57	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. D. J. C. Ltd. Agents Office on Mill premises	1384	13447	356	34		536
58	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. Lalbhai Dalpatbhai & Co. Agents Office on Mill premises	909	81	63	630		10
59	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. Mangal Das Chhabra & Co. Ltd. Agents Office on Mill premises	100	1173	64	53		750
60	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. No. 40 Ahmedabad Agents Office on Mill premises	9750	9441	616	9		10
61	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. Lalbhai Dalpatbhai & Co. Ltd. Agents Office on Mill premises	9780	900	648	4		1404
62	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. J. B. K. Fort Road Ltd. Agents Office on Mill premises	60	10101	400	30		5
63	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. J. B. K. Fort Road Ltd. Agents Office on Mill premises	901	4	139	1381		30
64	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. Lalbhai Dalpatbhai & Co. Ltd. Agents Office on Mill premises	1144	37184	850	83		1443
65	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. Maf. 11 (Lundal & Co. Ltd.) Agents Office on Mill premises	3164	301	700	10		134
66	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. An. Iram Ratanlal Ltd. Agents Office on Mill premises	1940	1747	408	384		683
67	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. H. B. K. Fort Road Ltd. Agents Office on Mill premises	434	55138	1383	10		966
68	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. H. B. K. Fort Road Ltd. Agents Office on Mill premises	1400	1199	480	451		608
69	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. H. B. K. Fort Road Ltd. Agents Office on Mill premises	9010	1861	404	400		908
70	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. H. B. K. Fort Road Ltd. Agents Office on Mill premises	9188	9030	500	700		1031
71	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. H. B. K. Fort Road Ltd. Agents Office on Mill premises	9440	97036	640	640		1197
72	New Rajp. & M. Co. Ltd. (former) Rajp. & M. Co. Ltd. Guntar Road Ahmedabad	Messrs. J. B. K. Fort Road Ltd. Agents Office on Mill premises	3844	31984	800	614		1030
Total			105740	17641	4403	39610	318	781

OTHER COTTON MILLS IN BOMBAY STATE

Sl. No.	NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles installed	Average number of spindles at work daily	Number of Looms installed	Average number of Looms at work daily	Average quantity of Cotton consumed during the year in each mill	Average number of Hands employed daily
1	Abdul Samad Haji Lal Muhammad Weaving Factory, Bhawanli (Thana District)	Khan Sheeh Abdul Samad Haji Lal Muhammad Owner, Office on Mill premises			240	177		265
2	Anjar Spinning and Weaving Mills Co., Ltd. (formerly Anjar Spinning and Weaving Co., Ltd.), Anjar (Kutch)	P. V. Shah, Esq. Chairman Office on Mill premises	2,736	2,128			1,040	202
3	Baroda Spinning and Weaving Co. Ltd. Puri Gate, near Bhadani, Baroda	Messrs. Javerchand Luximchand & Co. Agents, Office on Mill premises	30,976	30,002	644	641	7,317	1,260
4	Barsi Spinning and Weaving Mills Ltd. Barsi Town (District Sholapur)	Messrs. Desai Sons & Co., Managing Agents Office on Mill premises	10,900	9,899	276	269	3,011	987
5	Bharat Spg. and Wvg. Co., Ltd. No. 1 (formerly Hubli Mills, Ltd.), Hubli	Messrs. Purnesham Govindjee and Co. Managing Agents, Cool Mansion Homay Street Fort, Bombay	2,700	2,711	604	604	3,134	1,057
6	Bharat Spg. and Wvg. Co., Ltd. No. 2 (formerly Hubli Mills, Ltd.) Hubli	Messrs. Purnesham Govindjee and Co. Managing Agents, Cool Mansion Homay Street Fort Bombay	30,304	27,131	604	604	2,441	609
7	Bharat Vijaya Mills Ltd. (formerly Kolot Kapadi Spg. & Wvg. Mills Co. Ltd.) Koldi (North Gujarat)	Messrs. Ramnarul Champaklal & Co. Agents, Office on Mill premises	12,176	12,330	320	309	2,441	609
8	Breach Fine Counts Spinning and Weaving Co. Ltd. (formerly Breach Industrial Cotton Spinning and Weaving Co. Ltd.) Mohanpur Road, near Station, Breach	Messrs. Brijlal Balasani & Co. Agents, Aakhani Building Dilli Street Fort Bombay	9,848	22,802	742	432	953	908
9	Chalugan Shri Laxmi Narayan Mills Co. Ltd. (formerly Shri Laxmi Narayan Mills of the New Channung Pressing & Mfg. Co., Ltd.) Chhalugan, East Khandesh	Messrs. Narayan Hunkit Agent, Office on Mill premises	22,436	22,246	104	111	4,781	1,208
10	Chhotal Mills Ltd. (formerly Kolot Cotton Mills Co., Limited) Kolot (North Gujarat)	Messrs. Chotalal Hirachand & Co. Agents Office on Mill premises	18,000	18,000	406	408	7,261	700
11	Gadkari Mills Ltd. (formerly Bhagrath Spinning & Manufacturing Co. Ltd.) Jalgaon, East Khandesh	Messrs. H. M. Mehta & Co., Ltd., Agents Office on Mill premises	21,276	27,427	670	631	3,331	1,173
12	Gendral Mills Ltd. (formerly Bhagrath Spinning & Manufacturing Co. Ltd.) Jalgaon, East Khandesh	Sarajpal Gendral Brijlata Ing Managing Director Office on Mill premises	1,504	12,207	108	701	2,572	89
13	Gokak Mills Ltd. (formerly Gokak Water Power & Mfg. Co. Ltd.), Gokak Falls, Belgum District, S.M.C.	Messrs. Forbes, Forbes, Campbell & Co. Ltd., Agents Forbes Building Marine Street Fort Bombay	73,736	69,739	2	2	15,611	2,731
14	Gopal Mills Co. Ltd. (formerly Whittle Spg. & Mfg. Co., Ltd.) Mill No. 1, Mahatma Gandhi Road, Breach	Messrs. Nandlal Haridas & Co. Agents Co. The Vijaya Mills Co., Ltd. Naroli Road, Ahmedabad	21,748	11,206	602	526	4,450	1,250
15	Gopal Mills Co. Ltd. (formerly Whittle Spg. & Mfg. Co., Ltd.) Mill No. 2, Mahatma Gandhi Road, Breach	Messrs. Nandlal Haridas & Co. Agents Co. The Vijaya Mills Co., Ltd. Naroli Road, Ahmedabad	20,820	20,314	611	496	6,292	1,587
16	Jam Shri Rangitsingh Spinning and Weaving Mills Co., Ltd. Sholapur	Messrs. Lalji Narayn & Co. Agents 11 Bank Street Fort, Bombay	11,840	11,559			3,410	743
17	Jayashankar Mills, Barsi, Ltd., Barsi Town	Messrs. Zaidake & Co., Agents Office on Mill premises	15,774	1,067	376	308	2,780	652
18	Kanti Cotton Mills Ltd. (formerly Wadhwan Camp Mills), Surendranagar, Wadhwan Camp (Saurashtra)	Messrs. Chandulal Khatilal & Co. Mg. Agents Office on Mill premises	16,396	1,336	101	257	4,740	633
19	Keshav Mills Co. Ltd. Petli	Messrs. Chandulal Keshavlal & Co., Agents, Office on Mill premises	23,608	21,496	460	437	2,413	1,026
20	Khandesh Spinning and Wvg. Mills Co. Ltd., Jalgaon East Khandesh	Messrs. Indra Singh & Sons Ltd. Secretaries and Treasurers, Cardwell Building 42 Queen's Road, Back Bay Reclamation Fort Bombay	8,436	8,004			2,806	352
21	Krishna Kumar Mills Co. Ltd., Mahuva (Saurashtra)	Messrs. Surendranath Vagmalal & Co., Agents Office on Mill premises	45,262	42,103	1,213	1,210	10,000	2,728
22	Lakshmi Cotton Manufacturing Co., Ltd., Sholapur	Messrs. The Bombay Co. Ltd. Secretaries, Treasurers and Agents, 9 Wallace Street Fort Bombay	9,552	8,781			2,167	540
23	Lokamanya Mills Barsi Ltd., Barsi Town	Messrs. Dulakho & Co., Managing Agents Office on Mill premises	9,000	8,993	80	69	2,390	239
24	Madhavanagar Cotton Mills Ltd., P.O. Madhavanagar, Buldhagan (S.M.C.)	Mg. Agents, Office on Mill premises	27,620	2,620	896	840	2,757	1,360
25	Malatal Fine Spg. and Manufacturing Co. Ltd., Vejalpur Road, Nasari	Messrs. Navchandra Purnoharilal & Co., Ltd. Agents Office on Mill premises	18,952	16,842	406	321	9,933	1,186
26	Mahalaxmi Mills Ltd. Near Chavdi Gati, Bhavnagar	Messrs. Hargovandas Jivanlal & Sons, Ltd. Agents, Office on Mill premises	23,776	22,794	546	541	3,171	1,170
27	Maharana Mills, Ltd., P. R. Road (Kathawar)	Shree Nanubhai Kandas Mehta M.B.P. Owner, Swastik Bhawan Ugarda Pond Torbandar	2,706	1,937			260	118
28	Marathe Textile Mills Near Railway Station, Miraj (S.M.C.)	Messrs. B. K. Marathe & Sons, Partners, Office on Mill premises	12,824	10,794	214	167	1,611	609
29	Narayanand Chumal Cotton Spg. and Wvg. Mills, (formerly Gadac Cotton Spinning and Weaving Mills), Gadag, Dhawar (West)	Messrs. Narayanand Chumal, 312, Balha devi Road, Bombay No. 2	58,008	4,185	1,170	1,156	9,621	3,118
30	Narsingpur Manufacturing Co. Ltd., Station Road, Sholapur	Dhantajiraj Raju Narsingpurji, Agent, Office on Mill premises						

OTHER COTTON MILLS IN BOMBAY STATE

NAMES OF MILLS			NAME OF ASSETS OR OWNERS AND OFFICE ADDRESS		T Number of pind instal.	Average Number of Spindles at work per mill	Number of Looms instal.	Average Number of Looms at work per mill	Average Number of Spindles consumed during the year in candies of 1 lb.	Average Number of Hands employed per mill
30	Navj van Mills Ltd (formerly Kailash Mills Co Ltd)	Kailash Mills Co Ltd (formerly Kailash Mills Co Ltd)	Messrs R. Ramji Mangaldas & Co	Age 15, Office on Mill premises	390	110	10	103	1101	1049
31	New Cotton and S. H. Mills Ltd (formerly New Darbhanga Mills Ltd)	New Cotton and S. H. Mills Ltd (formerly New Darbhanga Mills Ltd)	Messrs H. M. Mehta & Sons Ltd	Age 15, Office on Mill premises	150	179	43	43	909	813
32	New Chitola Mills Ltd (formerly Kailash Mills Co Ltd)	New Chitola Mills Ltd (formerly Kailash Mills Co Ltd)	Messrs. Chitotai H. H. H. & Son	Age 15, Office on Mill premises	190	110	404	10	3174	799
33	New India Industries Ltd (formerly Kailash Mills Co Ltd)	New India Industries Ltd (formerly Kailash Mills Co Ltd)	Messrs D. S. H							

COTTON MILLS IN OTHER STATES

Names of Mills	Names of Agents or Owners and Office Addresses	Total Number of Spindles Installed	Average Number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Annual quantity of cotton consumed during the year for export of 74 lbs.	Average Number of Bales (500 lbs) sold daily
RAJPUTANA.							
1. Pabari Mills Co., Ltd., Bawar	Mr. S. B. Seth, Motilal Panwala Mg. Director, 12, 13 Street Bawar	20,488	19,511	776	596	5,471	1,055
2. Kumar Spg. & Wvg. Mills Ltd., Near Power House Jodhpur	Messrs. Shree Laxmi Trading Co. Ltd. Mg. Agents, Jodhpur Bazar, Jodhpur	7,016	4,181			1,155	201
3. K. S. & Textile Ltd., Bhungun, Kotah Tal.	Messrs. Sugarmal Spg. & Wvg. Mills Ltd. Mg. Agents, Office on Mill premises	7,300	5,500	100	115	951	441
4. Jodhpur Mills, Ltd., Near Ry. Station Bawar	Messrs. T. K. Bhatia & Co., Secunderabad Messrs. Treasurers on Mill premises Bawar	18,918	17,517	676	581	7,210	1,211
5. Mohitkashi Mills Co., Ltd., Bawar	R. S. Seth, Lal Bahadur, Mg. Director Bawar	13,728	13,271	416	461	3,610	825
6. Mohitkashi Kishengarh Mills Ltd., Malungu Kishengarh	Messrs. S. N. Industrial Agency Ltd. Mg. Agents, Malungu Kishengarh	26,640	23,900	331	376	6,407	1,210
7. Malvaraj Sri Umard Mills Ltd., Pali Marwar	Messrs. T. K. Bhatia & Co., Secunderabad Messrs. Treasurers on Mill premises	17,136	17,136	428	421	11,363	1,309
8. Mohar Textile Mills Ltd., Bhilwara	Messrs. Sahyambhai Sampatmal, Lathi Managing Agents, Office on Mill premises	7,812	7,511	250	226	7,113	717
9. Shree Bhav Cotton Mills Ltd. (formerly Bhav Furra Cloth Mills Co.) Near Ry. Station Bhujnagar (Ajmer)	Seth. Raghunathbhai, Managing Mg. Director, Office on Mill premises	11,500	7,101	327	308	2,812	612
10. Shree Mahadeo Cotton Mills Ltd., Bhilwara	Seth. Sanwarimal, Managing Mg. Director, Office on Mill premises	4,440	2,812	45	61	631	218
Total		1,32,808	1,18,012	3,632	2,663	48,016	7,799
BERAR.							
1. Berar Manufacturing Co., Ltd., Badnera	Messrs. Kancherla Dattabhai & Co. Agents, Haveli House, Sur Bhadrachalam, Madhya Pradesh	21,181	19,681	761	321	4,713	1,161
2. R. S. Bhandari Gopal Das Mohota Spg. and Wvg. Mills, Ltd. (formerly Akola Cotton Mills, Ltd.) Akola	Messrs. Bhandari Mohota & Co., Ltd., Mg. Agents, Office on Mill premises	21,876	20,741	466	411	6,116	1,311
3. Sanyam Ramprasad Mills Co., Ltd., Lagnath, Akola	Messrs. Savitram Sons Ltd., Agents, Akola	13,996	12,412	307	281	4,072	871
4. Varadha Mills, Dhar, Ltd., Elhelpur, Amravati District	Messrs. Deshmukh & Co., Secretaries, Treasurers and Agents, Office on Mill premises	12,092	11,511	317	318	3,257	801
Total		69,145	64,481	1,481	1,381	18,766	3,941
MADHYA PRADESH.							
1. Bengali Nagpur Cotton Mills, Ltd., Rajnandgaon	Messrs. Shaw Wallace & Co., Managing Agents, 4, Binkhall Street Calcutta	31,476	29,766	698	693	7,411	2,021
2. Burhanpur Textile Mill, Ltd., Burhanpur, Lal Bagh, Nimar District	Messrs. P. N. Mohota & Sons, Agents, Cooke Building, Bombay Road, Fort, Bombay	21,512	27,700	681	5	6,811	1,822
3. Central India Spinning, Weaving and Mfg. Co., Ltd. (Impressa Mills) Nagpur	Messrs. Tata Industries Ltd., Mg. Agents, Bombay House, 24, Bruce Street, Fort, Bombay	117,188	91,476	2,168	2,027	21,129	6,929
4. Model Mills Nagpur Ltd., Umre Road, Nagpur	Messrs. Bansal Abirbhai Dada Rao & Co., Agents, Haveli House, Sur Bhadrachalam, Madhya Pradesh	52,408	47,611	912	976	11,819	2,09
5. Pulgaon Cotton Mills Ltd. (formerly Pulgaon Cotton Spinning Weaving and Manufacturing Co., Ltd.) Pulgaon, Dist. Wardha.	Messrs. Hindalal, Sons, Mg. Agents, 53, Apollo Street, Fort, Bombay	15,728	14,660	215	215	3,801	1,211
6. Rai Bahadur Bansal Abirbhai Dada Rao & Co., Ltd. Hinganga, Dist. Wardha.	Shri. B. B. Bhatia & Co., Agents, Office on Mill premises	31,600	29,631	311	372	4,127	1,689
7. Rai Bahadur Peshwai Mohota Spinning and Weaving Mills, Ltd., Hinganga, Dist. Wardha	Seth. Mathuradas Mohota, Mg. Director, Hinganga, Dist.	21,672	20,671	412	311	3,817	1,426
Total		2,97,544	2,66,324	5,381	5,147	79,227	17,672
BIHAR.							
1. Bihar Cotton Mills, Ltd., Phulwari Sharif, Patna	Messrs. Kancherla Dattabhai & Co., Ltd., Mg. Agents, 12, 13 Street Bawar	7,632	6,137	119	152	1,417	426
2. Gaya Cotton and Jute Mills, Ltd., Gaya	Mr. P. P. Bhandari, Managing Director, Office on Mill premises	20,800	12,139	317	313	1,677	922
Total		27,832	18,276	436	465	3,094	1,348

COTTON MILLS IN OTHER STATES

NAME OF MILL	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles Installed	Average Number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approximate quantity of Cotton consumed during the year in canoes of 754 lbs	Average Number of Men employed daily
HYDERABAD (NIZAM'S TERRITORY).							
1 Aurangabad Mills, Ltd., Aurangabad	Messrs Gupta Sons, Ltd, Mg Agents, Empire House, Horns Road, Fort, Bombay	16,748	13,911	271	184	2,754	1,263
2 Azam Jala Mills, Ltd. Warrangal	The Industrial Trust Fund, H.E.H. the Nizam's Government, Agents, 139, Gun foundry Road, Hyderabad (Deccan)	19,944	19,817	472	426	9,403	1,312
3 Dewan Bahadur Ramgopal Mills, Ltd., Elchuguda, Secunderabad, Deccan	Messrs Lachminarayn Ramgopal & Sons Ltd., Agents, Post Box No 5, Secunderabad (Deccan)	16,776	15,420	303	284	3,112	977
4 Hyderabad (Deccan) Spg. and Wvg Co., Ltd., Elchuguda, Secunderabad (Deccan)	Messrs Ramnarayn Bhoomiah and Vinayak Krishniah, Agents, Post Box No 17, Secunderabad (Deccan)	17,080	9,589	241	182	1,869	819
5 Mahabub Shala Kailburga Mills Co., Ltd., Gulbarga	Messrs Dayaram Surajmal Lahoti, Agents, Begumpet (Deccan)	27,704	27,704	100	97	2,840	1,072
6 Oomanshala Mills, Ltd., Nanded	The Industrial Trust Fund, H.E.H. the Nizam's Government Agents, 139 Gun foundry Road, Hyderabad (Deccan)	21,880	24,226	623	607	6,810	1,670
Total		119,292	1,10,663	2,472	2,209	32,808	7,722
CENTRAL INDIA							
1 Bhopal Textiles Ltd., Bhopal	Messrs Sir J. P. Srivastava & Sons (Rampur) Ltd., Office on Mill premises	15,004	13,877	400	786	1,414	924
2 Binod Mills Co., Ltd (Binod Mill)-, Ujjain Gwalior	Messrs Binodram Bahadur Ltd. Secretaries, Treasurers and Agents, Office on Mill premises	3,300	34,995	807	818	19,616	2,019
3 Binod Mills Co., Ltd (Dechand Mills formerly Binod Cotton Mill), Gwalior	Messrs Binodram Balchand Ltd., Secretaries, Treasurers and Agents, Office on Mill premises	17,084	16,393	480	401		
4. Hira Mills, Ltd., Ujjain	Sir Sarupchand Hukamchand & Co., Agents, Sitabpata Bazar, Indore	26,732	23,324	864	780	8,007	1,427
5. Hukamchand Mills Ltd., Indore	Messrs Sarupchand Hukamchand & Co., Secretaries, Treasurers and Agents, Office on Mill premises	44,388	42,490	1,488	1,432	1,443	3,535
6 Indore Mahua United Mills, Ltd., (Old Mills) Indore City	Messrs Govindram Sekharia (Indore), Mg Agents, 139, Meadows Street, Fort, Bombay	52,602	49,728	1,420	1,203	18,127	3,395
7 Indore Mahua United Mills, Ltd., (New Mills) Indore City	Messrs Govindram Sekharia (Indore), Mg Agents, 139, Meadows Street, Fort, Bombay						
8 Jyotsnera Cotton Mills Ltd., Gwalior, (Near Morar Road Station)	Messrs Birla Bros. (Gwalior) Ltd., Managing Agents, Office on Mill premises	43,880	43,060	1,406	1,376	20,626	2,475
9 Kalyanmal Mills, Ltd., Indore	Messrs Tullochchand Kalyanmal & Co. Secretaries, Treasurers and Agents, Office on Mill premises	36,412	33,987	980	969	10,734	2,795
10 K. S. Nazareth Mills (with Recover), Nigatpura, Ujjain	Khan Sahib Seth Alabakh-sha Muniruddin Nazareth Proprietor, Office on Mill premises	16,940	16,000	379	369	3,200	720
11 Motilal Agarwal Mills, Ltd., Gwalior, (Near Morar Road Railway Station)	L. Bansidar Bansal, Esq., Mg Director, Office on Mill premises	13,300	10,121	.	.	2,783	334
12 Nandlal Bhandari Mills, Ltd., Indore	Messrs Nandlal Bhandari and Sons Secretaries, Treasurers and Agents, Office on Mill premises	28,008	27,162	771	709	12,387	1,737
13 Rai Bahadur Kanhoyal Bhandari Mills, Ltd (formerly the Maharajah Mill), Malgodown Road, Indore	Messrs Nandlal Bhandari & Sons Agents, Office on Mill premises	13,006	12,708	351	336	3,960	912
14 Rajkumar Mills, Ltd., Sihath Camp Road, Indore	Sir Sarupchand Hukamchand & Co., Agents, Office on Mill premises	19,728	19,451	701	640	6,150	1,637
15 Shree Sajjan Mills Ltd (formerly Rutlam Bombay United Spg and Wvg Co., Ltd.) Rutlam	Messrs Gopaldas Ishwar & Co., Ltd., Agents Office on Mill premises	15,821	15,515	440	418	5,114	1,207
16 Sri Maharaja Mahalaxmi Cotton Mills Co., Ltd., Dewas Junior	Seth Dwarikadas Dhirnivas, Agent Station Road, Ratlam	10,544	9,609	.	.	1,430	312
17 Swadeshi Cotton and Flour Mills Ltd., Sihath Camp, Indore City	Messrs Jagannath Narayan & Co., Managing Agents, Office on Mill premises	.	14,223	.	33	7,047	1,033
Total		.	3,83,746	.	1	1,32,678	25,320
WEST BENGAL.							
1. Anati Cotton Mills Ltd., Basumam, Howrah	Messrs Bose Bros. Mg Agents, 29, Strand Road, Calcutta.	.	1,853	.	.	50	119
2. Banga Sri Cotton Mills, Ltd., Sonarpore (24, Parganas)	Messrs Shukla Co., Ltd., Agents, 23, Hurst, Calcutta	.	931	.	.	1,614	.
3. Bangrawati Cotton Mills Ltd., Serampore, Hooghly	Dr. Narendra Nath, Managing Director, 63, Rajshahi, Calcutta	.	.	.	.	1,256	.
4. Bangsodia Cotton Mills Ltd., Panchhati, District 24 Parganas	Messrs Ranjit Ltd (24 Parganas)	.	.	.	.	.	.

COTTON MILLS IN OTHER STATES

NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles Installed	Average Number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approximate quantity of cotton consumed during the year in bales of 54 lbs.	Average Number of Hands employed daily
1. Basanti Cotton Mills, Ltd., Barrackpore Trunk Road, Panhati 24 Parganas	Messrs. The Calcutta Agencies Ltd., Mg Agents 24 Netaji Subhas Road Calcutta	12,604	12,394	376	352	1,602	768
6. Bengal Belting Works, Ltd. Bosepura Lane Serampore	Messrs. S. K. Roy & Co. Ltd. Mg Agents 2 Dalhousie Square East Calcutta	1,950	1,650	102	43	302	274
7. Bengal Laxmi Cotton Mills, Ltd. Mahesh Serampore, Dist. Hooghly	Messrs. The Bengal Textile Agency, Agents 11, Clive Row Calcutta.	3,916	34,507	936	904	3,521	1,691
8. Bowreah Cotton Mills Co. Ltd. Bowreah Dist. Howrah	Messrs. Kettlewell Bullen & Co., Ltd. Mg Agents 21 Strand Road, Calcutta	4,872	4,872	83	835	5,816	2,135
9. Duntar Mills Ltd., No 1 Shannagar (District 24 Parganas)	Messrs. Kettlewell Bullen & Co. Ltd. Agents, 21 Strand Road Calcutta	42,944	41,274	518	518	6,520	2,115
10. Duntar Mills Ltd., No 2, Shannagar (District 24 Parganas)							
11. Duntar Mills, Ltd., No 3 Shannagar (District 24 Parganas)							
12. Duntar Mills Ltd., No 4, Shannagar (District 24 Parganas)							
13. East India Cotton Mills Ltd., Maurigram Howrah District	Mr. S. P. Chakravarti and Mr. Manabendra Mohun Kundu Chowdhury, Mg Directors 120 Maharshi Debendra Road P.O. Hatikola Calcutta.			96	54		100
14. Hindustan Cotton Mills, Ltd. Balghoriah 24 Parganas	Dr. A. C. Sen Gupta Mg Director Calcutta National Bank Building, P. 2 Mission Row Extension, Calcutta.			120	56		82
15. Hooghly Cotton Mills Serampore	Mr. A. W. Sen Proprietor Serampore	57,900	48,270	1,900	1,874	17,123	4,031
16. Kesoram Cotton Mills, Ltd. (formerly Allied Cotton and Dye Works Ltd.) 42, Garden Reach Road, Calcutta	Messrs. Birla Bros. Ltd. Agents 8 Royal Exchange Place, Calcutta						
17. Mahalaxmi Cotton Mills, Ltd., Palta 24 Parganas	Messrs. H. Datta & Sons, Ltd., Mg Agents 15 Clive Street, Calcutta	2,788	2,391	169	166	1,079	347
18. Manindra Mills Ltd., Cossimbazar, Murshidabad West Bengal	Messrs. Choudhury Roy & Co., Ltd. 23 Hurro Chunder Mullick Street Calcutta			144	133		300
19. Mohan Mills, Ltd. (Mill No 2) Balghoriah 24 Parganas	Messrs. Chakravarti Sons & Co. Managing Agents 22 Canning Street Calcutta	17,370	15,893	334	331	3,248	844
20. Ramprosa Cotton Mills Ltd. (formerly Shri Narayan Cotton Mills) Serampore, Mohesh E.I. Ry. Bengal	Messrs. Hazanmull Heeralal, Mg Agents 148 Cotton Street, Calcutta	23,106	22,310	795	641	4,310	1,403
21. Shree Hanuman Cotton Mills Co. (formerly New King Mill Co. Ltd.), Fukeahwar P.O. Uluberia Dist. Howrah	Messrs. Partabmull Rameshwar & Narsing & Co. Owners 46, Strand Road Calcutta	24,190	23,333			3,730	770
22. Shree Radha Krishna Cotton Mills Ltd., Mill No 1 (formerly Goowary Cotton Mills) (in liquidation) 122, Old Ghosey Road, Howrah	Messrs. Sadharam Tularam Managing Agents 122, Ghosey Road, Howrah.	23,232					
23. Shree Radha Krishna Cotton Mills, Ltd. Mill No 2 (formerly Jagodia Cotton Mills Ltd.), 177, Girish Ghosh Road, Belur, Howrah Dist.	Messrs. Sadharam Tularam Managing Agents 122 Ghosey Road Howrah	18,732	18,000	594	532	1,796	893
24. Shree Radhekrishnan Mills, Ltd. (formerly Bharat Abhyuday Cotton Mills, Ltd.) 220, Naskarpura Road Ghosey, Howrah	Messrs. Sovaram Keshavdeo Mg Agents 13, Canning Street Calcutta	40,366	31,312	416	403	5,102	1,669
25. Siddheswar Cotton Mills, Anantapur Howrah	Messrs. Manna Mondal and Mullick Co. Owners Office on Mill premises.			117	79		92
26. Sri Durga Cotton Spg and Wvg Mills, Ltd., Koonnagar (E.I. Ry.)	Messrs. Choudhury & Co., Ltd., Agents 23 Hurroch under Mullick Street Calcutta	6,228	5,110	220	216	1,370	432
27. Swadeshi Industries Ltd., Panhati	Messrs. Anandram Gajdar Mg Agents 100, Netaji Subhas Road Calcutta			151	129		320
28. Victoria Cotton Mills Ghosey, Salkia I.O. Howrah District	Messrs. Partabmull Rameshwar & Narsing & Co. Proprietors, 46 Strand Road Calcutta	17,394	11,880			1,741	365
29. Vidyasagar Cotton Mills Ltd. Sodpur Dist. 24 Parganas	Messrs. United Commercial Agency, Ltd. Agents, 11, Calcutta Street Calcutta			156	134		223
Total		3,93,908	3,33,031	9,010	8,370	59,812	21,631

EAST PUNJAB

1. Dayalbagh Spg and Wvg Mills (formerly Bankatwar Cotton Mill, Ltd.) Putligar, G.T. Road Amritsar	Mr. Sahajpal, Maharaj Mills Ltd. Proprietors, Office on Mill premises	12,148	4,541	202	88	637	270
2. Punjab Cloth Mills Ltd. Bhawan (Dist. Hoshiar)	Mr. Radhakrishnan Puranmal Managing Director Bhawan	7,908	7,352	225	221	2,457	589
3. Seth Spinning Ltd. (formerly Amritsar Spg Mills) G.T. Road Amritsar	Messrs. Chundil Nath & Bros. Ltd. Mg Agents Office on Mill premises.	4,648	1,188	39	30	224	64
4. Technological Institute of Textiles (formerly Bhawan Cloth Mills, Ltd.) Bhawan	Birla Education Trust Agents, Patna (Jampur)	15,160	13,146	794	571	4,005	802
Total		37,864	26,466	624	610	7,822	1,725

DELHI PROVINCE

1. Birla Cotton Spinning and Weaving Mills Ltd. (formerly Hanoman and Mahadeo S and W Mills) Subzimi, Delhi	Messrs. Birla Bros. Ltd. Agents, 8 Royal Exchange Place Calcutta	32,023	29,631	969	797	11,354	1,799
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COTTON MILLS IN OTHER STATES

NAMES OF MILLS

NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES

Total
Number of
spindles
installed

Average
Number of
spindles
at work
daily

Number
of
Looms
installed

Average
Number of
Looms
at work
daily

Average
quantity
of Cotton
consumed
during the
year in
each of
each 100

Average
Number of
Hanks
emitted
daily

HYDERABAD (NIZAM'S TERRITORY).

1	Aurangabad Mills, Ltd., Aurangabad	Messrs Gupta Sons Ltd, Mfg Agents Empire House, Hornby Road, Fort, Bombay	16,448	13,011	271	194	2,744	1,265
2	Aram Jahi Mills, Ltd Warrangal	The Industrial Trust Fund, H.E.H. the Nizam's Government, Agents 179, Gun foundry Road Hyderabad (Deccan)	19,944	19,815	432	420	9,403	1,812
3	Dewan Bahadur Ramgopal Mills Ltd, Fitelegudda, Secunderabad, Deccan	Messrs Jachminarayan Ramgopal & Sons Ltd., Agents, Post Box No 5, Secunde rabad (Deccan)	16,476	15,420	703	284	3,12	977
4	Hyderabad (Deccan) Spg and Wvg Co., Ltd Fitelegudda Secunderabad (Deccan)	Messrs Panamra Bhoomch and Venkata Krishnaiah, Agents, Post Box No 1 Secunderabad (Deccan)	13,080	9,589	241	182	1,469	819
5	Mahabubulahi Kulburga Mills Co., Ltd., Gulbarga	Messrs Dayaram's Rajmal Lahoti, Agents Begumpet (Deccan)	27,764	27,704	100	507	840	1,612
6	Omrishahi Mills, Ltd., Nanded	The Industrial Trust Fund H.E.H. the Nizam's Government, Agents, 179, Gun foundry Road, Hyderabad (Deccan)	25,580	24,226	625	607	9,810	1,630
Total			119,292	110,063	2,472	2,200	12,585	7,727

CENTRAL INDIA

1	Bhujal Textiles Ltd., Bhopal	Messrs Sir J. P. Srinivasa & Sons (Rampur) Ltd., Office on Mill premises	15,004	13,877	100	186	1,114	924
2	Binal Mills Co. Ltd. (Binal Mills) Ujjain Gwalior	Messrs Binodram Ralchand Ltd. Secre taries, Treasurers and Agents, Office on Mill premises	35,300	13,995	857	818	11,646	1,019
4	Binal Mills Co. Ltd. (Deepchand Mills formerly of the Cotton Mill) Gwalior	Messrs Binodram Ralchand Ltd. Secre taries, Treasurers and Agents, Office on Mill premises	17,084	16,395	480	401		
4	Hira Mills Ltd. Ujjain	Sir Sarupchand Hukamchand & Co Agents, Sitabnata Bazar, Indore	26,732	23,524	864	780	8,067	1,427
5	Hukamchand Mills Ltd. Indore	Messrs Sarupchand Hukamchand & Co Secretaries, Treasurers and Agents, Office on Mill premises	44,388	42,400	1,488	1,422	10,443	3,535
6	Indore Malwa United Mills Ltd., (Old Mills) Indore City	Messrs Govindram Seksaria (Indore), Mg Agents, 179 Medow Street, Fort, Bombay	22,602	49,728	1,420	1,205	16,127	3,395
7	Indore Malwa United Mills, Ltd., (New Mills) Indore City	Messrs Govindram Seksaria (Indore), Mg Agents, 139, Medow Street, Fort, Bombay						
8	Jayaprakash Cotton Mills Ltd., Gwalior, (Near Morar Road Station)	Messrs Birla Bros., (Gwalior) Ltd., Managing Agents, Office on Mill premises	45,880	43,060	1,436	1,376	20,626	2,475
9	Kalyansahi Mills, Ltd., Indore	Messrs Tillockchand Kalyansahi & Co., Secretaries, Treasurers and Agents, Office on Mill premises	36,412	35,985	980	960	10,734	2,705
10	K. & Nazam's Mills (with Receiver) Nysipura Ujjain	Khan Sahib Seth Alabakhshji Mansuruddin Nazamgill Proprietor, Office on Mill premises	16,940	10,000	370	360	3,200	720
11	Mutlal Agarwal Mills, Ltd., Gwalior, (Near Morar Road Railway Station)	L. B. Muskar Bansal, Esq., Mg Director, Office on Mill premises	13,300	10,121	.	.	2,783	334
12	Nandil Bhandari Mills, Ltd., Indore	Messrs Nandil Bhandari and Sons, Secretaries, Treasurers and Agents, Office on Mill premises	28,008	27,162	771	759	12,387	1,737
13	Raj Bahadur Kambhwal Bhandari Mills, Ltd. (formerly the Maharajah Mills), Malgondan Road, Indore	Messrs Nandil Bhandari & Sons Agents, Office on Mill premises	15,606	12,798	751	330	3,960	912
14	Rajkumar Mills, Ltd., Sinath Camp Road Indore	Sir Sarupchand Hukamchand & Co Agents, Office on Mill premises	19,728	19,471	701	640	6,150	1,657
15	Shree Sajin Mills, Ltd. (formerly Rutlam Bombay United Spg. and Wvg Co., Ltd.) Rutlam	Messrs Ganesh Lal Rao & Co. Ltd., Agents, Office on Mill premises	15,824	15,515	446	418	5,144	1,207
16	Shri Maharaja Mahabubulahi Mills Co., Ltd., Devas Junior	Seth Dwarkadas Bhanumasi, Agent, Station Road, Ratlam	10,244	9,409	.	.	1,430	312
17	Sandesh Cotton and Flour Mills Ltd Sinath Camp, Indore City	Messrs Jaganmohandas Narayan & Co Manag ing Agents, Office on Mill premises	14,564	14,225	362	353	7,047	1,033
Total			4,07,706	3,83,746	10,916	10,276	1,32,078	25,320

WEST BENGAL.

1	Arata Cotton Mills Ltd., Dasmogor, Howrah	Messrs Dose Bros Mg Agents, 29, Strand Road, Calcutta	2,742	1,953	140	48	59	119
2	Banana Bra Cotton Mills, Ltd., Noidapore (24 Parganas)	Messrs Shah Choudhury & Co., Ltd., Agents, 25, Hurro Chunder Mullick St., Calcutta	10,728	9,931	276	276	1,614	495
3	Rangpur Cotton Mills Ltd., Serampore, Hooghly	Dr. Narendranath Law, Managing Director, 63, Radhikar, Calcutta	9,800	9,072	300	290	1,276	404
4	Rangpur Cotton Mills Ltd., Pandit, District, 24 Parganas	Messrs Ran, Ltd., Mg Agents, Pandit, (24 Parganas)	.	.	310	320	...	544

COTTON MILLS IN OTHER STATES

NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of spindles installed	Average Number of spindles at work daily	Number of Looms installed	Average Number of Looms at work daily	Approximate quantity of Cotton consumed during the year in tonnage of 48 lbs	Average Number of Hands employed daily
1 Basanti Cotton Mills Ltd, Barrackpore Trunk Road, Panhati, 24 Parganas	Messrs. The Calcutta Agencies, Ltd., Mg Agents, 24, Netaji Subhas Road, Calcutta	12,664	12,334	376	352	1,602	768
6 Bengal Belting Works, Ltd, Bosepura Lane Serampore	Messrs S K Roy & Co., Ltd, Mg Agents, 2 Dalhousie Square East, Calcutta	1,080	1,080	102	43	362	274
7. Bengal Laxmi Cotton Mills, Ltd Mahesh Serampore, Dist Hooghly	Messrs The Bengal Textile Agency, Agents 11, Chive Row, Calcutta	3,916	34,607	936	904	3,524	1,691
8. Bowreah Cotton Mills Co Ltd Bowreah, Dist Howrah	Messrs. Kethwell Bullen & Co., Ltd., Mg Agents, 21 Strand Road, Calcutta	42,872	42,872	835	835	5,610	2,118
9. Dumber Mills, Ltd, No 1, Shamnagar (District 24 Parganas)	Messrs Kettlewell Bullen & Co Ltd Agents 21 strand Road Calcutta	42,944	41,274	518	518	6,520	2,115
10. Dumber Mills, Ltd, No 2, Shamnagar (District 24 Parganas)							
11. Dumber Mills, Ltd, No 3 Shamnagar (District 24 Parganas)							
12. Dumber Mills, Ltd, No 4, Shamnagar (District 24 Parganas)							
13. East India Cotton Mills Ltd, Maungram, Howrah District	Mr S P Chakravarti and Mr Manabendra Mohan Kundu Chowdhury, Mg Directors 120, Maharsa Debendra Road, P O Hatikola, Calcutta			96	54		100
14. Hindustan Cotton Mills, Ltd, Belgurrah 24 Parganas	Dr A C Sen Gupta Mg Director, Calcutta National Bank Buildings, P 2 Mission Row Extension, Calcutta			120	56		82
15. Hooghly Cotton Mills, Serampore	Mr A W Sen Proprietor, Serampore						
16. Keoram Cotton Mills Ltd (formerly Allied Cotton and Dye Works, Ltd.), 42, Garden Reach Road, Calcutta	Messrs Birla Bros., Ltd Agents, 8, Royal Exchange Place, Calcutta	17,900	48,270	1,090	1,674	17,123	4,021
17. Mahalaxmi Cotton Mills, Ltd, Felis, 24 Parganas	Messrs H Datta & Sons Ltd Mg Agents 15, Chive Street Calcutta.	3,784	5,391	169	186	1,079	347
18. Manikdas Mills Ltd, Cosmubazar Murshidabad West Bengal	Messrs Choudhury Ray & Co., Ltd 23 Hurro Chunder Mullick Street, Calcutta			144	133		300
19. Mohini Mills, Ltd (Mill No 2), Belgurrah, 24 Parganas	Messrs Chakravarti Sons & Co. Managing Agents 22 Canning Street, Calcutta	17,340	15,893	334	331	3,218	844
20. Rampooria Cotton Mills Ltd (formerly Shri Narsing Cotton Mills), Serampore, Moresh E I Ry Bengal	Messrs Hazarimul Heeralal, Mg Agents, 148, Cotton Street, Calcutta	23,146	22,319	790	649	4,340	1,403
21. Shree Hanuman Cotton Mills Co (formerly New Ring Mill Co., Ltd.), Fuleswar, P O Uluberia Dist Howrah	Messrs Parthabul Rameshwar & Nursing & Co., Owners, 46, Strand Road, Calcutta	24,196	23,333			3,790	770
22. Shree Radha Krishna Cotton Mills, Ltd, Mill No 1 (formerly Gooerry Cotton Mills) (in liquidation) 122, O I Ghosey Road, Howrah	Messrs Salluram Tularam, Managing Agents, 122, Ghosey Road, Howrah.	23,232					
23. Shree Radha Krishna Cotton Mills, Ltd, Mill No 2 (formerly Jajodia Cotton Mills, Ltd), 170, Girish Ghosh Road, Belur, Howrah Dist	Messrs. Salluram Tularam, Managing Agents 122, Ghosey Road Howrah	18,732	15,540	504	532	1,796	990
24. Shree Radheshyam Mills, Ltd (formerly Bharat Abhoday Cotton Mills, Ltd) 220, Narkarpura Road, Ghosury, Howrah.	Messrs. Sovaram Keshavdeo, Mg Agents 133, Canning Street, Calcutta	45,706	31,312	416	403	5,102	1,669
25. Siddheswar Cotton Mills, Anantapur, Howrah	Messrs. Manna Mondal and Mullick Co., Owners, Office on Mill premises			112	79		92
26. Sri Durga Cotton Spg and Wvg Mills, Ltd, Konnagar (G I Ry)	Messrs Choudhury & Co., Ltd, Agents 23, Hurrochunder Mullick Street, Calcutta	6,224	5,110	220	216	1,370	432
27. Swadesh Industries Ltd, Panhati	Messrs. Anandram Gajdar, Mg Agents 100, Netaji Subhas Road Calcutta			151	129		320
28. Victoria Cotton Mills, Ghoosery, Salkia P O Howrah District	Messrs Partabmull Rameshwar & Nursing & Co Proprietors 46 Strand Road Calcutta	12,304	11,080			1,241	365
29. Vidyasagar Cotton Mills Ltd, Noddepur, Dist 24 Parganas	Messrs United Commercial Agency, Ltd, Agents, 11, Calcutta Street, Calcutta			156	134		223
Total		393,904	333,031	9,070	8,310	59,842	21,671

EAST PUNJAB

1 Dayalbagh Spg and Wvg Mills (formerly Benkateswar Cotton Mill, Ltd) Patharhi, G T Road, Amritsar	Mr Sahabji Maharaj Mills Ltd Proprietors, Office on Mill premises.	12,148	4,540	252	85	626	270
2 Punjab Cloth Mills, Ltd, Bhuwani (Dist Hissar)	Mr Radhakrishnan Parmanand Managing Director Bhawan	7,909	7,542	220	221	2,497	591
3 Seth Spinning Ltd (formerly Amritsar Spg Mills), G. T. Road, Amritsar	Messrs. Chandul Seth & Bros Ltd Mg Agents, Office on Mill premises	4,648	1,188	39	30	224	64
4 Technological Institute of Textiles (formerly Bhawan Cloth Mills, Ltd) Bhawan	Birla Education Trust, Agents, Pilani (Jaipur)	15,160	13,146	204	71	4,705	802
Total		39,864	26,456	874	610	7,852	1,725

DELHI PROVINCE.

1 Birla Cotton Spinning and Weaving Mills Ltd (formerly Hanuman and Mahadeo S and W Mills), Subzimundi, Delhi	Messrs. Birla Bros Ltd, Agents, 8 Royal Exchange Place, Calcutta	32,023	29,651	960	797	11,354	1,760
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COTTON MILLS IN OTHER STATES

Sl. No.	NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles installed	Average number of spindles at work daily	Number of Looms installed	Average number of Looms at work daily	Approximate quantity of Cotton consumed during the year 1941-42	Average number of persons employed
							in million lbs.	
2	Della Cloth and General Mills Co. Ltd. Mill No. 1, Rohtak Road, Delhi	Sir Shankar Lall, Mg. Director, Bara Hindu Rao P. B. No. 39, Delhi	7,194	73,079	1,811	1,817	32,490	4,241
3	Della Cloth and General Mills Co., Ltd. Mill No. 2, Rohtak Road, Delhi	Sir Shankar Lall, Mg. Director, Bara Hindu Rao P. B. No. 39, Delhi						
4	Della Cloth and General Mills Co., Ltd. Mill No. 3, Rohtak Road, Delhi	Sir Shankar Lall, Mg. Director, Bara Hindu Rao P. B. No. 39, Delhi						
5	Swatantra Millar Mills, Najafgarh Road, Delhi	The Della Cloth and General Mills Co. Ltd. (Delhi) Owners	25,680	17,737	128	218	8,124	1,818
6	Ceenika Cotton Spinning and Weaving Mills Co. Ltd., Mahabir Cotton Spinning Co., Ltd., Grand Trunk Road, Delhi	Messrs. Tarsaran Hamandras Managing Agents, Khajra Tolacco Khari Road, Delhi				307		
7	Lakshmi Chand & Co. Mills (Mahabir Cotton Spinning and Weaving Co. Ltd. Leaseholders), Subzmandi, Delhi	R. S. Seth Ram Chander Juyana, Owner, Off. in Mill premises	14,712	6,421	226	120	1,211	433
Total			1,47,604	1,27,092	1,810	3,258	53,313	7,011
UTTAR PRADESH								
1	Atherton Mills, Anwarganj, Kanpur	Messrs. Atherton Weid & Co. Ltd. Owners, Post Box No. 67, Kanpur	38,300	38,300	818	899	8,111	1,702
2	Banars Cotton and Silk Mills Ltd., Chowkhat, Kanpur	Messrs. J. L. Patel, Managing Agents, Office on Mill premises	2,112	19,877	91	108	6,494	1,124
3	Bigh Cotton Mills Ltd., Hathras (formerly T. L. Das Textile Mills Ltd.), Bara Gate, Mendu Road, Hathras City	Messrs. J. K. L. M. Agents, Freerang, Agra	12,780	11,481	11	11	1,111	660
4	Cawnpore Cotton Mills Co. (C. C. M.) Coopersganj, Kanpur	The British India Corporation Ltd. Owners, Post Box No. 1, Kanpur	4,206	44,118	872	906	19,601	2,569
5	Cawnpore Cotton Mills Co. (Joshi) Jauli, Kanpur	The British India Corporation Ltd. Owners, Post Box No. 3, Kanpur	26,311	26,001				660
6	Cawnpore Textiles Ltd., Coopersganj, Kanpur	Messrs. Begg, Sutherland & Co. Ltd. Mg. Agents, Sutherland House, Kanpur	3,936	23,742	510	509	7,901	840
7	Doyalbagh Textile Mills Ltd., Doyalbagh, Agra	Messrs. Begg, Sutherland & Co. Ltd. Mg. Agents, Doyalbagh			73	10		30
8	Flora Mills Co. Ltd., Civil Lines, Kanpur	Messrs. Begg, Sutherland & Co. Ltd. Mg. Agents, Sutherland House, Kanpur	12,162	49,327	1,194	1,159	21,278	2,646
9	Indra Spg. and Wvg. Mills (formerly Agro Spg. and Weaving Mills Co. Ltd.), Jeoni, Kanpur	Both S. K. and L. Owners, Office on Mill premises	13,910	12,108			1,401	329
10	John's Mills Co. (formerly John's Corporation Spg. Mill), Jeoni, Kanpur	Mr. J. P. John, Mr. M. J. John & Mrs. D. John, Merchants, Owners, 46, Cantt. Agra						
11	John's Mills Co. (formerly John's & Co. of Wale, Spg. and Weaving Mill), Jeoni, Kanpur	Mr. J. P. John, Mr. M. J. John & Mrs. D. John, Merchants, Owners, 46, Cantt. Agra	31,366	27,900			6,609	1,700
12	John's Mills Co. (formerly John's Spg. Mill), Jeoni, Kanpur	Mr. J. P. John, Mr. M. J. John & Mrs. D. John, Merchants, Owners, 46, Cantt. Agra						
13	J. K. Cotton Manufacturers Ltd., Darshunpura, Kanpur	Messrs. J. K. Commercial Corp. Ltd., Managing Agents, Kanpur Tower	21,400	20,167	30	24	6,806	760
14	Juggal Kamlay Cotton Spg. and Wvg. Mills Co. Ltd., Anwarganj, Kanpur	Sr. Pandit Kamlay Singh, Mg. Director, Dwarika Road, Kanpur Tower	44,004	43,220	909	924	7,930	1,864
15	Kanauj Dyeing & Wvg. Mills, Mol. Tatanali, Kanpur	Mr. L. Manilal Bhumadhar, Owners, Office on Mill premises			88	20		75
16	Lakshmi Cotton Mills Co., Ltd., Kulp Road, Kanpur	Messrs. B. R. Soni, Mg. Agents, Behari, Kanpur	29,340	26,340	773	504	3,437	804
17	Lala Mal Hardeo Das Cotton Spinning Mill Co., Sulai ad Gate, Hathras City, Aligarh District	Mr. Sheo Pershad, Controller, Office on Mill premises	10,882	10,092			4,025	470
18	Modi Spg. & Wvg. Mills Ltd., Modinagar (Meerut)	Messrs. R. B. Curjurnal, Modi & Bros., Mg. Agents, Office on Mill premises	20,000	18,000	380	301	324	851
19	Morabadi Spg. and Weaving Mills Co. Ltd., Morabadi, Kanpur	Mr. Hari Ray Swarup, Mg. Director, Kanpur, Morabadi	13,790	12,247			1,032	419
20	Mur Mills Co., Ltd., Kanpur	T. N. S. Taveri, Director, Civil Lines, Kanpur	88,128	84,602	1,360	1,520	22,162	2,877
21	Narain Cotton Mill, Banarmoni, Kanpur	Messrs. H. B. B. & Co. Proprietors, Banarmoni, Kanpur	14,661		189			
22	New Victoria Mills Co. Ltd., Gwalior, Kanpur	Messrs. J. P. Srivastava & Sons Ltd. Secretaries, P. B. No. 46, Kanpur	66,052	62,100	1,767	1,352	17,729	3,056
23	Prin Spinning and Weaving Mills Co. Ltd., Ujhani, District, Banda	L. Kailash, (Candra) Soni, Secretaries, Ujhani	17,600	13,883			1,993	613
24	Rehman Spg. and Wvg. Mills (formerly New Handloom Cotton Mills), Hathras City, Aligarh District	Messrs. H. K. Gulabhai & Co. Owners, Mirson Gate, Hathras City	20,020	1,308	171	139	4,099	608
25	Raza Textiles Ltd., Jwalna, Kanpur (State)	Sr. J. P. Srivastava & Sons (Kanpur) Ltd. Mg. Agents, Kanpur (State)	21,644	18,764	449	415	6,187	1,231
26	Sachin Cotton Mills, Duhoni	Messrs. S. K. S. & Co., Proprietors, Duhoni	3,440					
27	Shri Balu Krishna Mills (known as Mirzapur Cotton Mills), Mirzapur, Kanpur	Messrs. Sakshara Bros. Ltd. Agents, 1, Vivekananda Road, Calcutta			74	49		211
28	Shri Vikram Cotton Mills Ltd. (formerly P. G. Cotton Mills Co. Ltd.), Takhora, Lucknow	P. N. Singh & Sons Ltd., Managing Agents, Lucknow	17,544	17,031	321	272	3,101	922
29	Sandeep Cotton Mills Co. Ltd., Kanpur	Messrs. Jarpurji Brothers Ltd. General Mng. Kanpur	1,14,836	1,13,312	1,946	1,866	24,823	3,742
Total			7,93,010	7,09,607	12,431	11,363	1,83,768	30,541

COTTON MILLS IN OTHER STATES

NAMES OF MILLS		NAMES OF MANAGERS OR OWNERS AND OFFICE ADDRESSES		Total Number of Spinn- ing Machines	Average Number of Spindles at work daily	Number of Looms employed	Average Number of Looms at work daily	Average Number of Looms at work daily	Average Number of Looms at work daily
MADRAS STATE.									
1	Aaron Spinning and Weaving Mills Ltd Pappannam North Malabar	Mr C. S. M. Aaron, Mill Director Office on Mill premises	14,000	61	77	34	4	14	14
2	Asher Textiles Ltd, Avanasal Road, Trichy	Messrs. Textile Corporation Ltd Mg Agents, Avanasal Road, Trichy	14,000	13	90	83	75	44	431
3	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
4	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
5	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
6	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
7	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
8	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
9	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
10	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
11	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
12	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
13	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
14	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
15	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
16	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
17	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
18	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
19	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
20	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
21	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
22	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
23	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
24	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
25	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	14,000	13	90	83	75	44	431
26	B. Lakshmi Mills Ltd, 47 East Madras Station Road, Madras	Mr A. H. S. Ramaswamy Iyer & Co 47, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77							

COTTON MILLS IN OTHER STATES

NAMES OF MILLS

NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES

			Total Number of Spindles Installed	Average number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approximate quantity of Cotton produced in the year in lbs.	Average Number of Horse Power
2	Della Cloth and General Mills Co Ltd Mill No 1 Rohtak Road Delhi	Sir Shankar Lal Mg Director Bira H N L Rao P B No 37 Delhi						
3	Delhi Cloth and General Mills Co Ltd Mill No 2 Rohtak Road Delhi	Sr Shankar Lal Mg Director Bira K N L Rao P B No 33 Delhi	71,884	73,999	1,821	1,817	32,490	421
4	Delhi Cloth and General Mills Co Ltd Mill No 3 Rohtak Road Delhi	Sr Shankar Lal Mg Director Bira H N L Rao P B No 39 Delhi						
5	Saantana Bharat Mills Najafgarh Road Delhi	The Delhi Cloth and General Mills Co Ltd (Delhi) Owners	25,480	17,737	228	218	8,124	78
6	Goeika Cotton Spinning and Weaving Mills Co Ltd Mahalir Cotton Spinning Co Ltd, Crown Trunk Road Delhi	Messrs Farman Harnam Rai Mun gung Agents Khattri Tobacco Khatri Road Delhi			397	307		
7	Lakmi Chan Jaspura Mills (Mahalir Cotton Spinning and Weaving Co Ltd Jaspurholere) Sikrimal Delhi	P D Seth Ram Cowsar Jaspurholere Office on Mill premises	14,712	6,672	226	120	1,769	477
Total			14,104	1,97,092	3,890	3,209	53,237	7,061

UTTAR PRADESH

1	Atterton Mills Anwarang Jampur	Messrs Atterton West & Co Ltd Owners Post Box No 67 Kanpur	78,300	39,300	894	890	8,070	1,762
2	Bharsa Cotton and Silk Mills Ltd Chavhapat Bharsa Cantonment	Messrs Sat Prasad Khurig Prasad Mg Agents Office on Mill premises	3,117	1,377	603	399	6,491	1,134
3	Bigh Cotton Mills Ltd Hathras (formerly Tuli & Tajpal Mills Ltd) Sahi Pat Main Road Main Road City	Messrs J K L Mg Agents Freerang Agra	1,780	11,880	20	11	2,821	600
4	Cawnpore Cotton Mills Co (C M) Co perung Kanpur	The British India Corporation Ltd Owners Post Box No 3 Kanpur	4,990	41,773	37	366	19,601	2,669
5	Cawnpore Cotton Mill Co (C M) Co perung Kanpur	The British India Corporation Ltd Owners Post Box No 3 Kanpur	76,721	76,061				
6	Cawnpore Textiles Ltd Co perung Kanpur	Messrs Begs Sutherland & Co Ltd Mg Agents Sutherland House Kanpur	13,936	25,742	510	300	7,902	847
7	Davallagh Textile Mills Ltd Davallagh Agra	Messrs Saeed Seerity and Service Corpora tion Ltd Agents Davallagh Agra			72	10		3
8	Flora Mills Co Ltd Civil Lines Kanpur	Messrs Begs Sutherland & Co Ltd Mg Agents Sutherland House Kanpur	22,852	43,327	1,199	1,159	21,278	2,641
9	Inlax Spg and Wvg Mills (formerly Agra Spg and Weaving Mills Co Ltd) Jeon ka Marh Agra	S D Sagan Jani Owners Office on Mill premises	13,970	13,109			1,401	32
10	John's Mills Co (formerly John's Coronat on Spg Mills) Jeon ka Marh Agra	Mr J I John Mr M I John & Mrs D John Merritt & Owners 48 Cantt Agra	21,370	27,990			8,609	1,7
11	John's Mills Co (formerly John's Coronat on Spg Mills) Jeon ka Marh Agra	Mr J I John Mr M I John & Mrs D John Merritt & Owners 48 Cantt Agra						
12	John's Mills Co (formerly John's Spg Mills) Jeon ka Marh Agra	Mr J I John Mr M I John & Mrs D John Merritt & Owners 48 Cantt Agra						
13	J K Cotton Manufacturers Ltd Darsimpura Kamla Nagar Kanpur	Messrs J K Commercial Corp Ltd Managing Agents Kamla Tower Kanpur	2,740	20,167	30	24	6,886	
14	Jugadil Kamlayat Cotton Spg and Wvg Mills Co Ltd, Anwarang Jampur	Sr Talamay Singhania Mg Director Daarkad Road Kamla Tower Kanpur	44,964	43,720	979	924	7,930	1,8
15	Kanauj Dyeing & Wvg Mills Mol Pitanaia Kanauj P	Mr J Malial Benundhya Owner Office on Mill premises			28	30		
16	Lakshmantan Cotton Mills Co Ltd Kalpi Post Kanpur	Messrs B J Soni Mg Agents Belora Nivas Kanpur	79,340	26,340	773	501	3,437	
17	Lal Mahardwari Cotton Spinning Mills Co Sudhahi Gate Hasti ras City Aligarh District	Mr Bhoj Prasad Controller Office on Mill premises	10,882	10,092			4,629	
18	Mohi Singh & Wvg Mills Ltd Mohanagar (Noida) Aligarh	Messrs R B Chatterjee, Modi & Bros, Mg Agents Office on Mill premises	70,000	18,000	380	300	324	
19	Mori Lal Spinning and Weaving Mills Co Ltd Mori Lal	Mr Hari Ram Dwivedi Mg Director Kandhupur Mori Lal	13,066	19,247			1,032	
20	Mur Mills Co Ltd Kanpur	Mr T N Tavernier Director Civil Lines Kanpur	98,128	84,603	1,360	1,200	22,162	2,700
21	Nara Cotton Mill Binsarith Kanpur	Messrs H Bevis & Co Proprietors Suljandhi Kanpur	14,656		140			
22	New Victoria Mills Co Ltd Gaudat Kanpur	Messrs J P Srivastava & Sons Ltd Secretaries P B No 4 Kanpur	66,033	62,106	1,367	1,302	17,729	3,7
23	Prem Spinning and Weaving Mills Co Ltd Ujain District Balaia	L Kaulash Chandra Soni Secretary Ujain	17,000	13,680			1,930	
24	Rumel and Spg and Wvg Mills (formerly New Rumel and Cotton Mills) Hasti ras City Aligarh District	Messrs Jiral Jiralchand & Co Owners Musan Cant Hasti ras City	0,070	1,708	171	150	4,009	
25	Rwa Textile Ltd Jalandhar Rumpur (State)	Sr J P Srivastava & Sons (Rampur) 111 Mg Agents Rampur (State)	21,634	18,764	440	41	6,187	1,7
26	Saefan Cotton Mills Sahi ras	Messrs Saefan Sahi ras Agents Saei Park Sahi ras Kanpur	3,440					
27	Shri Bhatia Krishna Mills (known as Mirzapur Cotton Mills) Narghat Mirzapur	Messrs Sekhara Bros Ltd Agents 15 Vekkhara Road Calcutta			74	43		2,7
28	Shri Vikram Cotton Mills Ltd (formerly R C Cotton Mills Co Ltd) Talikotia Lucknow	Ranjit Singh & Sons Ltd Managing Agents Lucknow	17,341	17,031	371	272	3,101	
29	Sankesh Cotton Mills Co Ltd Sahi ras	Messrs Jaspur Brothers Ltd (General Agency Kanpur)	1,14,836	1,13,712	1,916	1,806	21,823	
Total			783,010	7,09,607	12,451	11,363	1,87,769	

COTTON MILLS IN OTHER STATES AND PAKISTAN

NAME OF MILLS	NAMES OF AGENTS, OR OWNERS AND OFFICE ADDRESS	Total Number of Spindles Installed	Average Number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approximate quantity of cotton consumed during the year in run line of 744 lbs	Average Number of Hands employed daily
73. Vysalakshmi Mills, Ltd (formerly Vyaya Mills Ltd.), Kunialanathur, Coimbatore	Messrs Gupta & Co., Ltd, Agents, Post Box No 11, Coimbatore	11,032	9,838			1,967	293
Total		16,80,183	15,22,915	7,634	6,415	3,36,318	71,487
COCHIN & TRAVANCORE							
1. A. D. Cotton Mills, Ltd., Quilon	Messrs Girdharlal Amratlal & Co. Mg Agents Office on Mill premises	12,000	10,525	300	265	1,675	410
2. Alagappa Textiles (Cochin) Ltd (Alagappa Textiles), Alagappanagar (Cochin State)	Messrs Ramal & Co., Ltd Managing Agents Alagappanagar P. O (Cochin State)	44,300	20,773			3,764	1,199
3. Alagappa Textiles (Cochin) Ltd (Cochin Textiles), Alagappanagar (Cochin State)	Messrs Ramal & Co. Ltd Managing Agents, Alagappanagar P. O (Cochin State)						
4. Alwaya Textiles, Ltd., Alwaya	Messrs Shankar Agencies Ltd Mg Agents Alwaya	6,704	1,608	10		120	118
5. Cochin Mahalakshmi Cotton Mills Ltd, Mulakunnathukavu, Cochin State	Messrs Cochin Agencies & Industries Ltd Managing Office on Mill premises	1,700	1,500			200	87
6. Sitarani Spg and Wvg Mills, Ltd, Trichur, Cochin State	Messrs T. R. Anantharama Iyer & Bros. Ltd Managing Agents, Puthupattur, Trichur	15,614	15,381	416	387	3,472	789
7. Vayamohani Mills Ltd., Thiruvalla Poojappara, Travancrum	Messrs Eswaran & Co. Mg Agents, Office on Mill premises	6,720	5,305			316	202
Total		56,834	61,092	726	652	9,537	2,835
MYSORE.							
1. Bangalore Woollen, Cotton and Silk Mills Co., Ltd., Agrahara Road, Bangalore City	Messrs Bunn & Co. (Madras) Ltd Secys, Treas., & Agents, 7, Armenian Street, Madras	40,608	39,196	1,157	1,092	12,311	4,145
2. Davangere Cotton Mills, Ltd., Davangere	Messrs R. Hanumanthappa & Son, Managing Agents, Hanumanthappa Building, Chittaldurg Road, Davangere	16,128	13,215			3,579	666
3. Minerva Mills, Ltd., Bangalore City	Messrs S. Sivar & Co. Ltd, Mg Agents, Temple Bar Building, 70 Forbes Street, Fort, Bombay	34,616	33,172	476	475	9,212	1,712
4. Mysore Spinning and Manufacturing Co., Ltd., Venkatarangangar Rd., Malleshwaram, Bangalore City	Messrs N. Sivar & Co. Ltd, Mg Agents, Temple Bar Building, 70 Forbes Street, Fort, Bombay	49,696	45,571	800	484	10,692	2,315
5. Sri Krishnarajendra Mills, Ltd., Siddalingapur, Mysore	Mr. H. Nanjundia, Chairman & Mg Director, Office on Mill premises	25,200	23,296	202	264	5,714	1,244
6. Sri Krishna Weaving Mills, Subramanyapura, Kengeri Post, Uttarahalli, Bangalore City	Messrs Yadalani Subbushetty & Sons, Proprietor, Checkpost, Bangalore City			174	168		401
7. Sri Shankara Textile Mills Ltd., Davangere	Messrs Marucharanappa Company, Post Box No. 2, Davangere	6,600	6,600			613	229
8. Shree Suryodaya Mills (formerly Bangalore Spg and Weaving Mill), Yeshwanthpur, Bangalore City	Messrs Rama Settar and P. S. Sathappa Chettur, Proprietors, Office on Mill premises			73	50		142
9. T. R. Mills, Chamarajpet, Bangalore City	D. R. Madhava Krishnappa, Owner, Office on Mill premises			208	165		155
Total		1,72,245	1,61,089	2,880	2,698	42,121	11,299
PONDICHERRY.							
1. Anglo French Textile Co., Ltd (Rocher Mill), Pondicherry	Messrs Boet & Co., Ltd, Managing Agents, Post Box No 63, Madras	44,256	41,094	1,000	649	11,110	3,333
2. Etablissement Textile De Modelarpeth S. A. (formerly The Pondicherry Cotton Mills, Ltd.), Modelarpeth, Pondicherry.	Mr. S. C. Ayyavoo, Managing Director, Post Box No 10, Pondicherry	15,960	13,701	305	292	1,977	938
3. "Savanna" Societe Anonyme de Filature et Tissage Mecanique, Savana (Indo-francaise), Pondicherry.	Mr. Marcel Valot, General Manager, Office on Mill premises	22,968	22,875	675	672	6,207	1,792
Total		83,193	80,670	1,980	1,613	19,394	6,053
INDIAN DOMINION Total		1,05,33,799	98,55,265	1,97,807	1,81,848	21,62,719	4,63,075

PAKISTAN

SIND.

1. Daulatram Spg & Wvg Mills (formerly Surti Textile Mills), New Jail Country Club Road, Karachi	Jamnadass Bhu Dutia Esq., Proprietor, Country Club Road, Karachi	2,216	2,216	60		762	161
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EAST BENGAL.

2. Ashary & Prafulla Chandra Cotton Mills, Ltd., Boyra Main Road, Khulna	Messrs Bengal Workers' Association Ltd. Mg Agents, 3, Madan Street, Calcutta			110	47		129
3. Bagerhat Co-operative Weaving Union Ltd., Bagerhat, E. Bengal.	Messrs Bengal Provincial Co-operative Bank Ltd, Mg Agents, 32, Dalhousie Square, East Calcutta.			50	35		55

COTTON MILLS IN OTHER STATES

	NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles in- stalled	Average Number of Spindles at work daily	Number of Looms in-stalled	Average Number of Looms at work daily	Average Quantity of Lintons consumed per spindle per year at the rate of 744 lbs.	Average Number of Hands employed daily
38	Maidra Mills Co. Ltd. Ambalamudram (formerly Tinnelly Mills Co. Ltd.) Ambusamudram	Messrs. A & F Harvey Ltd. Managers Ma Jura	140 736	131 683			34 674	494
39	Madura Mills Co. Ltd. (Pandyani Mills Madura)	Messrs. A & F Harvey Ltd. Managers Madura	33 304	"8 701			8 071	108
40	Malakal Textile Mills Ltd. Madurai	Messrs. S. S. N. Lakshmanan Chettiar & Co. Mgrs. Agents. Pundial P O Madurai	21 67	"1 627			5 60	784
41	Malabar Spinning and Weaving Co. Ltd. Kallai	Messrs. A. L. A. R. Somasundaram Chettiar & P. S. Sathappa Chettiar and A. K. T. K. M. Narayanan Namboodripad Agents Kallai	20 "1	19 808			"	477
42	Mettur Industries Ltd. Mettur Dam	Messrs. W. A. Boardwell & Co. Ltd. Agents Post Box No. 7 Madras	24 "9	24 "52	603	603	8 367	846
43	Palaru River Mills Ltd. Dhal Road Udawalpur	Messrs. Bhagyalakshmi & Co. Mgrs. Agents Office on Mill premises	2 000	20 324			34 9	412
44	Pichay Mills Ltd. Pulakulam Coimbatore	Messrs. C. S. Ratnasabapathy Mudaliar & Sons. Mgrs. Agents & Secretaries P O No. 150 Coimbatore	"7 66	"5 689			107	713
45	Pillar Mills Ltd. Tirunelveli Salen District	Messrs. V. V. C. R. V. apuri Mudaliar & Sons. Agents Trichengode	1 900	9 69			1 830	195
46	Radiakal Mills Ltd. Peelamedu Coimbatore	Messrs. A. G. Gururaman Naik & Co. Mgrs. Agents Office on Mill premises	36 464	34 066			8 161	870
47	Raja Mills Madurai	Mrs. M. P. Kanagasaveli General Office on Mill premises	8 030	8 000			11 3	300
48	Rajalakshmi Mills Ltd. Uppalapalayam Singanailur P O Coimbatore	Messrs. B. Rangaswami Reddy & Sons Managing Agent Office on Mill premises	"5 896	"0 112			4 1	697
49	Rajapalayam Mills Ltd. Rajapalayam Rameswar Road	Ramco Agency Ltd. Mgrs. Agents Ramamandram Rajapalayam	14 "00	13 467			4 717	603
50	Sankar Mills Chatram Padukulam Tirunelveli	S. Sankaranarayan Pillai & Sons Proprietors Office on Mill premises			101	94		8
51	Sareja Mills Ltd. Singanailur Coimbatore	Messrs. Thiagaraya Chetty & Sons Ltd. Managing Agents Office on Mill premises	13 00	12 488			1 991	942
52	Shree Venkateswara Mills Ltd. Ulmalpet Coimbatore District	Messrs. G. V. Chandrasekhar Naidu & Co. Managing Agents 389 Paspattipudi Mudali Street Udumalpet	38 660	37 930	"98	6	3 846	637
53	Somasundaram Mills Ltd. (formerly Coimbatore Mills) 720 Mill Road Coimbatore	Mrs. P. S. Sathappa Chettiar Mgr. Agent Trichengode Coimbatore	3 200	"1 031	390	307	2 498	1 100
54	Solaris Mills Ltd. Power House Pond Dundigul	Messrs. Lakshmana & Co. Mgrs. Agents Office on Mill premises	9 600	8 783			1 081	"98
55	Sree Moenaki Mills Ltd. Tirupparankunnam Road Madurai	Messrs. Thiagaraya Chetty & Co. Mgrs. Agents Office on Mill premises	37 "04	36 43			13 001	1 302
56	Sri Jagadamba Mills Ltd. (formerly Salem Rajendra Mills Ltd.) Canchi Nagar Selan	Messrs. Thiagaraya Chetty & Co. Ltd. Agents Vennakalu Nilayam Tiruppur inkundam Road Madurai	17 "00	14 507			3 807	450
57	Sreenivasagar Mills Ltd. Rajapalayam Rameswar District	Messrs. Sree Alagesa Ltd. Mgrs. Agents Sarawati Naras, Sivagampan Street Rajapalayam	"00	4 60			1 80	"14
58	Sree Suryanarayana Sugarcane Works Mills Imdalurka Godavari District	Mrs. V. Sundar Valli Sattyannarayana Murthy Managing Director Office on Mill premises	"584	5 360			374	"18
59	Sri Balasubrahmanyam Mills Ltd. Singanailur Coimbatore	Messrs. K. Ananthaswamy Naik & Bros. Agents Office on Mill premises	1 090	1 090			1 433	359
60	Sri Bolandaram Mills (Weaving) Venkatapaty Pyngar Street Rameswar Road Madurai	Messrs. S. S. Ramadas Iyer & Bros. Owners 272 Rameswar Road Madurai			8	8		91
61	Sri Kothniram Mills (Spinning) Chintamani Road Depot Poond Malappuram	Messrs. S. S. Ramadas Iyer & Bros. Owners Rammed Road Madurai	4 000	3 976			1 68	"15
62	Sri Lalimal Rajanganni Mills Ltd. Perambur kuppasalai P O Coimbatore District	Messrs. S. K. Rangaswami Naidu & Co. Mgrs. Agents Office on Mill premises	5 600	5 540			1 126	141
63	Sri Ramachandra Sugarcane Works Mills Panjala Godavari District	Messrs. D. Subbarao & Bhargava Prasad & U. Chellamma Proprietors Office on Mill premises	"044	5 878			163	"64
64	Sri Ramalinga Choudhary Mills Ltd. Kul Road Thirupudaimoorthy	Messrs. S. Kull Chettiar & Bros. Mgrs. Agents 60 10 Uttuk Road Tiruppur	13 174	11 90			2 318	360
65	Sri Ranga Mills Company Spinning and Weaving Mills Ltd. Ivel med Coimbatore	Messrs. P. S. Govindaswami Naidu & Sons Mgrs. Agents Office on Mill premises	3 972	"8 390	87	73	4 30	712
66	Sri Sarsa Mills Ltd. Lodhanthapuram Pollur Coimbatore	Messrs. V. S. Sengottiah & Bros. Mgrs. Agents Bakthin Nilai Jail Road Coimbatore	14 47	13 893	170	143	2 643	39
67	Sri Sattanarayana Sugarcane Mills, Rajal Mundry Godavari District	Rao Sahib Vallilanon Bapayya Chowdary Proprietor Rajahmundry	5 004	4 960			337	133
68	Thiakkurala (Irran) of Shree Moenaki Mills Ltd. Muluruli Leppanatti Pulukkotta State	Messrs. The Sree Moenaki Mills Ltd. Madurai Owners Manaparai Post Trichy	"1 600	"0 730			1 971	"9
69	Tirunagal Mills Ltd. Culivattam North Arcot	Messrs. Tirunagai & Co. Ltd. Agents Office on Mill premises	1 40	8 066			1 6	278
70	Tirumurti Mills Ltd. Badpatti Udumalpet Coimbatore District	Messrs. Jayalakshmi & Co. Agents Office on Mill premises	11 60	11 281			10	269
71	Trichonopoly Mills Ltd. Kudugol Manapparai Road Trichonopoly	Messrs. Moolejee Ramjee and Sons Ramjee Nagar Trichonopoly	18 000	10 831			"6 6	200
72	Vasanta Mills Ltd. Singanailur Coimbatore	Messrs. T. K. Shanmukham Chetty & Bros. Managing Agents and Secretaries Office on Mill premises	"0 304	27 864	270	"07	5 741	88

COTTON MILLS IN OTHER STATES AND PAKISTAN

NAME OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles in all d	Average Number of Spindles per worker per day	Number of Looms installed	Average Number of Looms at work per day	Approximate quantity of Cotton consumed during the year in tons of 754 lbs	Average Number of Hands employed daily
73 Vayalaskari Mills Ltd (formerly Vayala Mills Ltd) Kunyamthur Coimbatore	Messrs Gupta & Co Ltd Agents, Post Box No 11 Coimbatore	11 037	98 4			1 067	293
COCHIN & TRAVANCORE		Total	16 80 188	15 0 815	7 634	6 415	736 348
1 A D Cotton Mills Ltd Quilon	Messrs Girdharlal Amritlal & Co Mg Agents Office on Mill premises	12 1	10 3 2	3 80	96	1 675	410
2 Alagappa Textiles (Cochin) Ltd (Alagappa Textiles) Alagappanagar (Cochin State)	Messrs Ramal & Co Ltd Managing Agents Alagappanagar P O (Cochin State)	44 301	8 7			3 764	1 199
3 Alagappa Textiles (Cochin) Ltd (Cochin Textiles) Alagappanagar (Cochin State)	Messrs Ramal & Co Ltd Managing Agents Alagappanagar P O (Cochin State)						
4 Alwaya Textiles Ltd Alwaya	Messrs Shankar Agencies Ltd Mg Agents Alwaya	1 04	1 1 4	1		1 9	118
5 Cochin Mahalakshmi Cotton Mills Ltd Mulakumathukavu Cochin State	Messrs Cochin Agencies & Industries Ltd Managing Office on Mill premises	1 1	1			200	87
6 Saram Spg and Wvg Mills Ltd Trichur Cochin State	Messrs T R Anandarama Iyer & Bros Ltd Managing Agents Trichur	1 614	1 3 1	41 1	3 4	3 4 2	789
7 Vayamohani Mills Ltd Tirunelveli Poovapuram Travancore	Messrs Bannara & Co Mg Agents Office on Mill premises	6 7 1	5 30 4			316	202
MYSORE		Total	86 634	61 09	7 70	6 2	9 37
1 Bangalore Woollen Cotton and Silk Mills Co Ltd Agraharam Road Bangalore City	Messrs Bannara & Co (Madras) Ltd Secy Treas & Agents 7 Agraharam Street Madras	40 64 5	39 10 3	1 15	1 61	1 7 111	4 14 5
2 Davangere Cotton Mills Ltd Davangere	Messrs R Hanumanthappa & Son Managing Agents Hanumanthappa Building Chitralde Road Davangere	16 1 8	13 9 1			3 57 3	1 06
3 Minerva Mills Ltd Bangalore City	Messrs N S Rao & Co Ltd Mg Agents Temple Bar Building 70 Forbes Street Fort Bombay	31 016	33 17 0	47 1	47 3	9 2 1	1 712
4 Mysore Spinning and Manufacturing Co Ltd Venkatarang Nagar Pd Malleshwaram Bangalore City	Messrs N S Rao & Co Ltd Mg Agents Temple Bar Building 70 Forbes Street Fort Bombay	39 6 3	4 37 1	5 3	484	10 6 3	2 315
5 Sri Krishna Sridharappa Mills Ltd Siddalagapur Mysore	Mrs H Nanjundam Channarayana & Mg Director Office on Mill premises	25 000	3 2 16	20	214	214	1 244
6 Sri Krishna Weaving Mill Subramanyapuram Kengeri Post Uttarahalli	Messrs Yadalana Sribal Setty & Sons, Proprietor Chitpet Bangalore City			174	188		461
7 Sri Nankar Textile Mills Ltd Davangere	Messrs Murugharajendra Company Post Box No 2 Davangere	6 680	6 60			613	29
8 Shree Suryodaya Mills (formerly Bangalore Spg and Weaving Mill) Yeshwantpur Bangalore City	Messrs Rama Settar and P S Sathappa Chettiar Proprietors Office on Mill premises			73	50		142
9 T R Mills Channarayana Bangalore City	D R Madhava Krishnaya Owner Office on Mill premises			208	16 3		355
PONDICHERRY		Total	1 7 218	1 61 08	2 880	2 690	4 1 1 1
1 Anglo-French Textile Co Ltd (Roder Mill) Pondicherry	Messrs Host & Co Ltd Managing Agents Post Box No 63 Madras	41 25 1	41 09 1	1 090	619	11 140	3 323
2 Establishment Textile De Modharpet S A (formerly The Pondicherry Cotton Mills Ltd) Modharpet Pondicherry	Mrs S C Ayyavoo Managing Director Post Box No 10 Pondicherry	15 060	13 70 1	30	292	1 957	938
3 Savana Societe Anonyme de Filature et Tissage Mecanique Savana (Inde française) Pondicherry	Mrs Marcel Valot General Manager Office on Mill premises	2 065	2 87 5	67	67 0	6 707	1 792
INDIAN DOMINION Total		Total	63 193	80 1 0	1 980	1 613	19,304
PAKISTAN		INDIAN DOMINION Total	10,33 799	95 55,265	1 97,807	1 81 848	21 6 719

SIND

1 Dastur Spg & Wvg Mills (formerly Sind Textile Mills) New Jail Country Club Road Karachi	Jamnadass Ispahani & Co Proprietor Country Club Road Karachi	2 216	2 216	60		5 1	151
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EAST BENGAL

2 Acharya Prafulla Chandra Cotton Mills Ltd Boyra Main Road Khulna	Messrs Bengal Workers Association Ltd Mg Agents 3 Madan Street Calcutta			110	4 1		129
3 Bhabani Co-operative Weaving Union Ltd Jagerhat, E Bengal	Messrs Bengal Provincial Co-operative Bank Ltd Mg Agents 3 Dalhousie Square East Calcutta			50	25		65

COTTON MILLS IN COURSE OF ERECTION

NAMES OF MILLS		NAMES OF AGENT OR OWNERS AND OFFICE ADDRESSES		Total Number of Spindles Install- ed.	Average Number of Spindles at work daily	Number of Looms Install- ed	Average Number of Looms at work daily	Approx- imate quan- tity of Cotton consumed during the year (in thou- sands of 240 lbs)	Average Number of Hands employ- ed daily
1	Chittaran Cotton Mills Ltd Narayanganj	Messrs The Kalyan Industrial Estate Ltd Mg Agents 4 Simpson Road Dacca.	97	8708	150	148	4113	36	
2	Dacca Cotton Mills Ltd Postgolla P O	Messrs Canny Madanlal Hamesh Ujantra Jogish Chandra Das Mg Agents Office on Mill premises	4500	200	194	114	600	307	
3	Dhaka Cotton Mills Ltd Mill No 1	Sri Basanta Mg Director 215 Sridhar Lane Sargatola Dacca	98390	94238	78	608	4	140	
4	Dhaka Cotton Mills Ltd Mill No 2	Sri Basanta Mg Director 4 Sr das Lane Sargatola Dacca	180	10940	511	343	4	1030	
5	Dhaka Cotton Mills Ltd Colony	Messrs The Dacca National Agency Ltd Mg Agents 3 Johnson Road Dacca	008	500	22	20	800	00	
6	Dhaka Cotton Mills Ltd Wagon Mill	Messrs Textile Trust Ltd Agents P 30 Princep Street Calcutta 12	044	400			180	87	
7	Dhaka Cotton Mills Ltd Jharkhand	Messrs Chakrabarti Bros & Co Managng Agents 9 Canning Street Calcutta	18640	16339	227	499	1311	1033	
WEST PUNJAB									
8	Dhaka Cotton Mills (Branch of Dhaka Cloth and Mills Co Ltd) Jwalpur	Branch of Dhaka Cloth and General Mill Delhi	300	23073	294	809	1310	1480	
9	Dhaka Cotton Mills Ltd Mela Ram Road Lahore	Mr P B Gopal Das & Sons Ltd Proj and Occupers Post Box No 90 Lalor	10116	10936	148	144	300	576	
10	Dhaka Cotton Mills Ltd P O Kot Dun Chand	D D L Singh Esq Mg Director 9 Feroz Road Lahore	040	4674			96	196	
11	Dhaka Cotton Mills Ltd Okara	Messrs B R B Bros Ltd Mg Agents 8 Royal Exchange Place Calcutta	800	21904	80	846	883	9874	
PAKISTAN Total				18960	14604	4601	390	40887	10608
GRAND TOTAL (INDIAN DOMINION & PAKISTAN)				1003431	9701510	408180	992	303408	473630

COTTON MILLS IN COURSE OF ERECTION (1949)

NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESS	Total Number of Spindles installed	Average Number of Spindles at work daily	Number of Looms installed	Average Number of Looms at work daily	Average quantity of cotton consumed during 10 year in pound & of 704 lbs.	Average Number of Man in employment daily
BOMBAY STATE							
1. N. N. Bhatia & Co. Ltd. B. G. Ltd. B. G. Ltd. (Dist. B. G. Ltd.)	Mr. M. A. Patel, M. G. Agent North Kasha, Sholapur City	10,000		2,000			
2. S. R. T. & M. B. Ltd. V. S. R. T. & M. B. Ltd. V. S. R. T. & M. B. Ltd.	Messrs. Kanchanlal Kapadia & Co. Ltd. M. G. Agents, Office on M. B. premises	10,000					
3. Z. S. R. T. & M. B. Ltd. V. S. R. T. & M. B. Ltd. (Company of G. S. R. T. & M. B. Ltd.)	Messrs. Balirama Bahadur & Co. Secretaries, Treasurers and Agents Office on M. B. premises	19,000		300			
MADHYA PRADESH							
1. N. N. Bhatia & Co. Ltd. B. G. Ltd. B. G. Ltd. (Dist. B. G. Ltd.)	Messrs. Madhuprasad Manmohanadas Agents, Allahabad	19,000		300			
ORISSA							
1. Orissa Textile Mills Ltd. * V. S. R. T. & M. B. Ltd. (Dist. B. G. Ltd.)	Messrs. B. S. R. T. & M. B. Ltd. M. G. Agents Office on M. B. premises	44,000		43*			
WEST BENGAL							
1. Ray of Bengal Textiles Ltd. Joyramore (Dist. B. G. Ltd.)	Messrs. A. Rashid & Co. M. G. Agents 20, F. Waterloo Street Calcutta	10,000		200			
2. Bengal Fine Spinning and Weaving Mills Ltd. (Kannagar (F. I. B.))	Messrs. B. C. Nawn & Bros. Ltd. M. G. Agents, Mercantile Bldg. Lathar Calcutta	13,700					
3. Bengal Textile Mills Ltd.	Messrs. D. N. Chatterjee & Co. Ltd. M. G. Agents, 23, Hurroolunir Mullick St. Calcutta	1,000		5,000			
4. Ray Cotton Mills Ltd.	Messrs. Humatengka & Sons Ltd. M. G. Agents, 6, Old Post Office Street Calcutta	90,000					
5. Dhalowara Textiles Ltd. Near Asansol West Bengal	Messrs. G. K. Ghosh & Co. (Textiles) Ltd. M. G. Agents, Norton Bldg. 1 & 2 Old Court House Corner Calcutta	13,000		100			
6. D. N. Chatterjee Cotton Mills Ltd.	Messrs. Chatterjee Industries Ltd. Secre- taries and Agents, 23, Hurroolunir Mullick Street P. O. H. K. Calcutta	8,000		1,00			

* Started functioning in the beg. spring of 1950

COTTON MILLS IN COURSE OF ERECTION

NAMES OF MILLS	NAMES OF AGENTS OR OWNERS AND OFFICE ADDRESSES	Total Number of Spindles Installed	Average Number of Spindles at work daily	Number of Looms Installed	Average Number of Looms at work daily	Approximate quantity of cotton consumed daily, in 1911	Average Number of Hands employed daily
7 Emerald Cotton Mills Ltd., Shammugur (B. A. Bly), 24 Parganas	Messrs. Century Agencies Ltd., Agents P. 7 Mission River Extension, Calcutta	12,128					
8 Kalyan Spg. and Wvg. Mills Ltd., Birati, 24 Parganas	Messrs. A. K. Choudhri & Co., Ltd., 87 Daramtola Street, Calcutta 17	19,000		400			
9 Sodepore Cotton Mills Ltd., Sodepore, 24 Parganas	Messrs. Choudhri Textiles Ltd., Agents 22 Hurro Chunder Mullick Street, Calcutta 17	10,000		170			
10 Nee Annapurna Cotton Mills Ltd., Shammugur, 24 Parganas	Messrs. Chakravarti Mukerjee & Co., Ltd. Agents, 214 Cross Street, Calcutta						
MADRAS STATE.							
1 Hemalatha Textiles Ltd., Pelakkam, Nambur, R. S. Gunter Dist.	Messrs. Sudarshan Ltd., Dar House, Eplandi, Madras	12,000					
2 Madura Srinivas Mills Ltd., Tiruppurankum, Rood, Pannadai Post	Messrs. Srinivasan & Co., Mg. Agents, Madurai (S. India)	6,000		100			
3 Marugananda Mills Ltd., Pettu, Tirumali Town	Mr. G. Subramanian Pillai, Mg. Director, G. I. N. Taluk, West Car Street, Tirunelveli, Trav. (S. India)	12,000		100			
4 Premier Mills (C. B. J.) Ltd., Pulimukar Village, Udumalpet Taluk, Coimbatore	Messrs. J. Narayan, Managing, Nair & Co., Mg. Agents, Periyalva & Dhilly Fort						
5 Rajawari Mills Ltd., Rly. Station Road, Gudiyattam Town, North Arcot Dist.	Messrs. Guliyattam Textiles Ltd., Mg. Agents, Office on Mill premises	6,000					
6 Rayalaseema Mills Ltd., Rayanagar, near Alim, Bellary Dist.	Messrs. Rayalaseema Development Co., Mg. Agents, Office on Mill premises	17,000					
7 Sri Kanneppan Mills Ltd., Coimbatore	Messrs. K. Venkataswamy Nair & Co., Mg. Agents, 5-1, Capitalpore, Coimbatore	10,000					
8 Swathanthra Mills Ltd., Makankor Karur, Trichinopoly Dist.	Messrs. Swami & Murthy, Mg. Agents, 68, Car Street, Karur, Trichinopoly District	15,500		200			
9 Tattorian Spg. Mills Ltd., Palani Cottah Road, Tuticorin	Mr. V. M. M. Srinivasan, Nadar, Mg. Director, 84 A, South Rajah Street, Tuticorin	12,000					
10 Vijaya Kumar Mills Ltd., Kalyanpattur P. O. (17) Palu S. I. Hill, Coimbatore Dist.	Messrs. Curuswamy Nair & Co., Mg. Agents, Office on Mill premises	17,440					
TRAVANCORE							
1 Balarama Varma Textiles Ltd., Shinnottal, Travancore	Messrs. Karayalar Bros & Co., Mg. Agents, Taluk, Travancorem	12,000					
MYSORE.							
1 Kaps Textile Mills Ltd., Nanjanur I	Messrs. C. P. C. & Co., Mg. Agents, Gandlia, Mysore	15,184		302			
2 Sree Ganesar Textile Mills Ltd., Davanagere	Messrs. G. Mahadevappa & Bros., Mg. Agents and Secretaries, Davanagere	25,000		300			

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Reserve Fund " 18,00,000
Total Deposits, 30-6-50 " 7,54,20,000
Total Working Funds " 9,02,46,000
No. of Accounts 68,700
No. of Branches 51

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The Indian Cotton Textile Industry—Centenary Volume (1950)

Classified List of Advertisers

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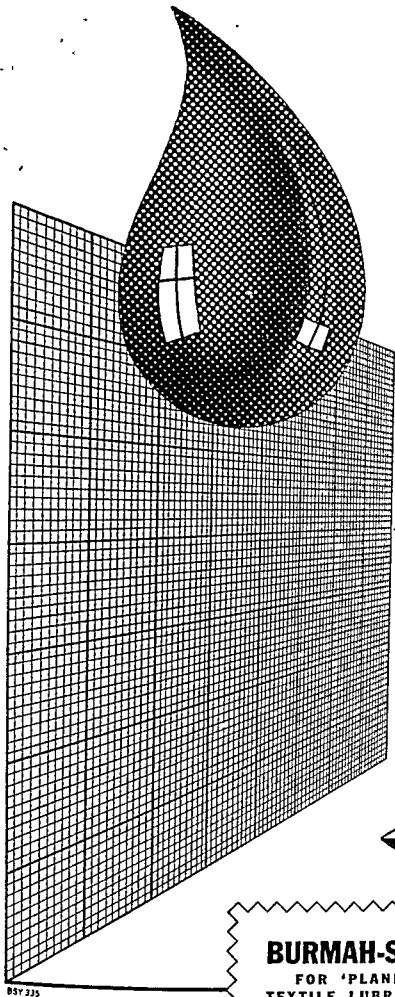
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